

South Australian Year Book



1968

This page was added on 11 January 2013 to included the Disclaimer below.
No other amendments were made to this Product

DISCLAIMER

Users are warned that this historic issue of this publication series may contain language or views which, reflecting the authors' attitudes or that of the period in which the item was written, may be considered to be inappropriate or offensive today.

**SOUTH AUSTRALIAN
YEAR BOOK
1968**

Adelaide City Council

The City of Adelaide silhouetted against
the Mount Lofty Ranges at dusk.





*South
Australian
Year Book*

No. 3 : 1968

D. L. J. AITCHISON

*Deputy Commonwealth Statistician
and Government Statist*

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS
SOUTH AUSTRALIAN OFFICE

By Authority:

Wholly set up and printed in Australia by
A. B. JAMES, Government Printer, Adelaide

Registered at the General Post Office, Adelaide, for transmission through the post as a book

PREFACE

Official statistics of South Australia are published in different media, each chosen as the most appropriate to meet a particular need. Mimeographed issues include bulletins or press releases which give as soon as available figures and some comment concerning a particular subject and a *Monthly Summary of Statistics* which supplies the latest information on a selected range of subjects. Printed publications embrace a *Quarterly Abstract of South Australian Statistics* which presents an up to date and reasonably comprehensive range of data on economic and social conditions in this State, a *Pocket Year Book of South Australia* which contains a wide range of statistical information in a compact form and a *Statistical Register of South Australia* (issued both in parts and in one volume) in which is provided, without comment, detailed historical and current statistics in many fields.

The *South Australian Year Book* completes the set of authoritative statistical publications. Its aim is to portray South Australia both in figures and in text. Thus it ranges from an historical, geographical and climatological description of the State through a study of its constitutional, social, physical and financial development to a picture of South Australia as it is today. This volume, the third issue of the Year Book, includes some new articles—on the Population Census, the Licensing Act, Decimal Currency, and the Wine Industry of South Australia—and such statistics of the 1966 Census as were available at the time of printing. Some historical information has been condensed but appropriate cross-references to the relevant articles in the first and second issues are given.

I gratefully acknowledge the valuable assistance given by contributors of special articles and by the various government departments and firms who supplied the photographs and plates used. I also appreciate the continuing interest in this project shown by the Government Printer and his staff. My special thanks are tendered to Mr I. R. Collins, B.Ec., A.A.S.A., under whose direction the Year Book was compiled by Mr G. D. Carey, B.Ec., A.A.S.A.(Senior), and to Mr P. W. Hodgkinson, B.Ec., and Mr H. E. Vivian, A.A.S.A., for their valuable support of Mr Collins in this work.

D. L. J. AITCHISON

Deputy Commonwealth Statistician
and Government Statist

Commonwealth Bureau of Census and Statistics

195 North Terrace

Adelaide

July, 1968

CONTENTS

[illegible]

	Page
Part 8 PHYSICAL DEVELOPMENT	
8.1 Water Supply and Sewerage	275
8.2 Irrigation and Drainage	283
8.3 Roads	287
8.4 Railways	291
8.5 Harbors and Aerodromes	295
8.6 Electricity and Gas	302
8.7 Housing and Building	307
Part 9 PRODUCTION	
9.1 Rural Industries	324
9.2 Mining, Forestry and Fisheries	397
9.3 Manufacturing	416
9.4 Value of Production	447
Part 10 COMMERCE	
10.1 Internal Trade	449
10.2 Overseas Trade	454
10.3 Prices	466
Part 11 TRANSPORT AND COMMUNICATION	
11.1 Transport	473
11.2 Communication	501
Part 12 PUBLIC FINANCE	
12.1 Structure of Public Finance	510
12.2 Commonwealth-State Financial Relations	512
12.3 State Government Finance	517
12.4 Semi-Government Finance	530
12.5 Local Government Finance	535
Part 13 PRIVATE FINANCE	
13.1 Banking and Currency	540
13.2 Insurance	557
13.3 Other Private Finance	562
Appendix A STATISTICAL SUMMARY	573
Appendix B PRINCIPAL EVENTS	596
Appendix C RECENT INFORMATION	605
Index	607
List of Statistical Publications	619
Detailed Map of South Australia	Inside Back Cover

PART 1

NATURAL ENVIRONMENT

1.1 DESCRIPTION

Size and Location

The State of South Australia has the ocean to the south and is flanked on the other sides by land. It lies south of the 26th parallel of south latitude and has as a western boundary the 129th meridian of east longitude. The eastern boundary, north of the River Murray, corresponds with the 141st meridian, while to the south, between the river and the sea, the boundary lies approximately two miles to the west of this meridian.

The State is approximately 746 miles from east to west at the northern boundary and 710 miles at the head of the Great Australian Bight; from north to south it varies from 391 miles near the western extremity to approximately 823 miles near the eastern boundary; its coastline, excluding islands, measures approximately 2,100 miles. South Australia covers a total area of 380,070 square miles (one-eighth of the area of the Australian continent); however, approximately one-third of this area has no significant use and over one-half is devoted to extensive pastoral pursuits. Approximately 99 per cent of the population live south of the 32nd parallel.

South Australia uses what is known as Central Standard Time, which is nine hours thirty minutes ahead of Greenwich Mean Time, and thirty minutes behind Eastern Standard Time used by States on the east coast of Australia.

Physical Features

South Australia is a land of generally low relief, the inland area being largely covered by featureless plains, or sand and gibber deserts. Approximately 50 per cent of the State is less than 500 feet above sea level and over 80 per cent less than 1,000 feet. Even the dominant mountains, the Mount Lofty-Flinders system, nowhere exceed 4,000 feet and nowadays at no point prove really difficult barriers to communication.

On the other hand the pattern of communication and development has been greatly influenced by the nature of the coastline, the south-easterly trend of which

is interrupted by two major indentations, Spencer Gulf and Gulf St Vincent. These two relatively shallow depressions cut into the settled areas a distance of approximately 200 and 100 miles respectively. The resultant natural divisions earlier tended to develop their own centres and many ports were constructed along the coast in spite of the fact that, with the exception of the area between Port Lincoln and Fowlers Bay, the nature of the coastline is not particularly accommodating to port development.

Kangaroo Island, approximately 260 miles in circumference and covering 1,680 square miles, is by far the predominant island of the South Australian coastline. There are, however, approximately 100 islands in all, relatively few of which are utilised.

The vast ocean area to the south results in a more temperate climate than would be suggested by the latitude, while the trend of the coastline exposes the coastal areas to the westerly rain-bearing air streams.

The most important mountains are the Mount Lofty-Flinders Ranges system. Kangaroo Island structurally belongs to these ranges which, together with parallel subsidiary ranges, extend north from Cape Jervis some 500 miles to the northern end of Lake Torrens. In the south the rounded hills of the Mount Lofty Ranges are of comparatively low altitude with Mount Lofty itself 2,334 feet. The western side of these ranges presents steep scarps to the Adelaide plains while on the eastern side more gentle slopes merge into the Murray basin.

To the north the Flinders Ranges are of greater height and sharper outline than their southern counterpart. St Mary Peak of 3,900 feet is the highest point. North of Peterborough there is a divergence from the main range which stretches *via* the Olary Ridges to the Barrier Range and Broken Hill. In the far north the ranges again diverge; one spur circling the northern end of Lake Torrens and the other ending north of Lake Frome. The Flinders Ranges contain some unusual basins of which Wilpena Pound is perhaps the best known.

The Mount Lofty-Flinders chain has an important climatic influence; higher rainfall on the plains to the west of the ranges, and in the ranges themselves, with relatively dry conditions in the Murray basin.

The western half of the State is largely occupied by a low plateau over which an intermittent series of low ranges, including the Warburton, Stuart, Denison, Peake and Everard Ranges, stretch from the Flinders to the somewhat higher Musgrave Ranges in the far north-west. Mount Woodroffe (4,970 feet) the highest point in the State, is located in the Musgrave Ranges.

The comparatively low hills of the Gawler Ranges form the northern side of the Eyre Peninsula triangle, and to the west of Whyalla lie the economically important Middleback Ranges. Isolated peaks of volcanic origin are found in the extreme south-east of the State.

The River Murray, which drains approximately one-seventh of Australia, enters the sea in South Australia and is the State's only major river. The fall of the Murray is very slight, dropping less than seventy feet over the 399 miles between the border and the sea. For the 134 miles to Overland Corner the river occupies a wide valley and then passes through a narrower steeper-sided valley to Lakes Alexandrina and Albert at its heavily silted mouth.

Surrounding the northern Flinders Ranges is a series of vast lakes which are in reality lakes only after particularly heavy rainfall, normally appearing as shallow depressions with a salt or clay encrusted surface. Lake Eyre, the largest of these, is thirty-nine feet below sea level and is fed by a series of intermittently

flowing rivers, including the Finke, the Diamantina and Cooper Creek, which traverse the plains of the north-east, constituting one of the largest areas of internal drainage in the world. To the south of Lake Eyre are Lakes Gairdner, Frome and Torrens, the last named being 150 miles in length.

General Geological Background

The physiography of the State very accurately outlines the geological features, the areas of higher relief being the basement rocks protruding as cores or ridges through the flat-lying younger sediments of the basin areas.

The main physiographic feature is the Kangaroo Island-Mount Lofty-Flinders Ranges arc of hills, which, although of no great elevation, extend over a distance of 500 miles. The rocks of this arc, which are predominantly ancient sediments, have been folded and faulted in a spectacular manner providing many classic examples of textbook tectonics; they owe their present prominence to repeated fold and uplift movements throughout geological time. The hills of the chain rise from the coastal plains of Gulf St Vincent to the west, the plains of the Murray River to the east, and the Lake Frome and Lake Eyre plains in the north-east and north. The basement rocks are also exposed to the west of Spencer Gulf, but here they are more completely levelled off, and constitute a geological shield of greater antiquity than the Mount Lofty arc.

In the far north-west of the State, the ancient basement is again exposed in the east-west trending hills of the Musgrave and Everard Ranges. These ranges form the northern boundary of the Great Victoria Desert, which with the great coastal Nullarbor plain, covers the western half of the State.

There is thus a broad geological picture of ancient crystalline or partly crystalline folded rocks forming highland chains and provinces, surrounded by relatively young and soft flat-lying sediments which have accumulated in deep troughs and basins during periodic transgressions and regressions of the sea throughout most of geological time.

It is in the hard rock provinces that are found the deposits of minerals and rocks which are playing such an important role in the present high rate of industrial development of the State. The basin areas are important as sources of artesian water and are currently the areas in which vigorous petroleum exploration is proceeding and in which important natural gas discoveries have already been made.

In general, the younger sediments of the basin areas do not provide good agricultural soils except in the higher rainfall areas of the south and south-east of the State, while the best agricultural lands lie in the hard rock provinces of the Gawler-Barossa-Clare regions of the central ranges where relatively good rainfall is associated with more mature soil conditions.

1.2 CLIMATE AND METEOROLOGY

In the Southern Hemisphere, because of the extensive ocean areas and the absence of a broad land mass connecting the Antarctic with the tropical regions, the southern continents are not subject to the same range of weather extremes experienced in northern countries at similar latitudes. The ameliorating effect of this land-sea distribution is particularly noticeable in southern South Australia.

Briefly, the basic features of the South Australian climate are hot, dry summers with relatively mild nights, and cool but not severe winters with most rainfall occurring during the months of May, June, July and August.

METEOROLOGICAL OBSERVATIONS

Meteorological services throughout Australia are administered by the Commonwealth Bureau of Meteorology and the Regional Office of the Bureau in Adelaide directs operations throughout South Australia. Daily weather reporting stations are established at over sixty representative localities and there are over 750 rainfall recording stations.

Station weather observations telegraphed several times a day provide the basic information for the weather forecasting and warning services provided by the Regional Office and for aircraft flight forecasts provided by the Adelaide Airport. These observations are also collated in bulletins, maps and reports issued for public information. The reports include climatic surveys which are studies of climatic variations over defined regions of the State.

RAINFALL

Average Annual Rainfall

South Australia is by far the driest of the Australian States and Territories with just over four-fifths of the State receiving an average of less than 10 inches of rain annually. An indication of the shortage of rain in the State is given in the following table which compares the relative distribution of rainfall in South Australia and in Australia as a whole.

Distribution of Rainfall, South Australia and Australia

Average Annual Rainfall	Proportion of Total Area	
	South Australia	Australia
	per cent	per cent
Under 10 inches.....	82.8	39.0
10 and under 15 inches	9.4	20.6
15 and under 20 inches	4.5	11.2
20 and under 25 inches	2.2	9.0
25 and under 30 inches	0.8	7.2
30 and under 40 inches	0.3	6.1
40 inches and over	(a)	6.9
Total	100.0	100.0

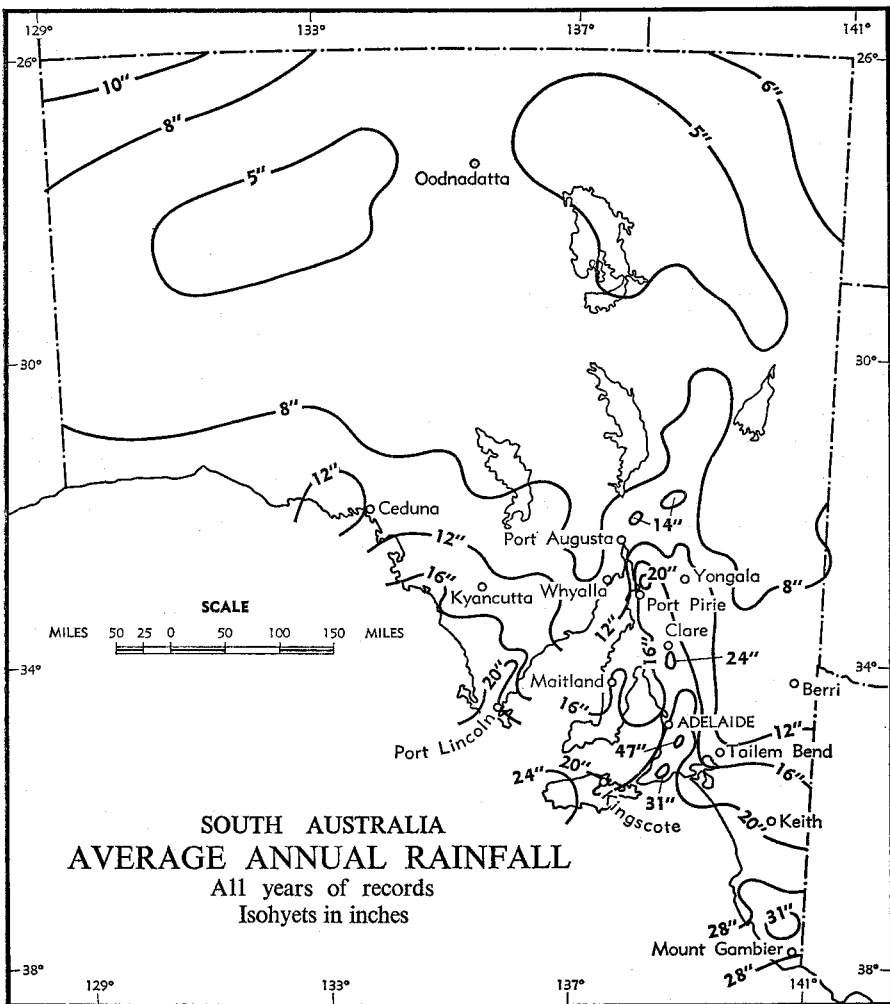
(a) Less than 0.05 per cent—an area of the order of 75 square miles in the Mount Lofty Ranges.

Over the southern half of South Australia the main source of rain comes from showers associated with unstable moist westerly airstreams occurring fairly regularly during winter. The wettest part of the State is in the Mount Lofty Ranges, immediately east of Adelaide where the average annual rainfall, in the vicinity of Stirling, is about 47 inches. The Flinders Ranges have the effect of extending a strip area of higher rainfall well to the north.

As can be seen from Map 1 the isohyets generally show highest annual averages along the ranges and southern parts of the coast. Averages fall off rapidly to less than 10 inches within 100 to 150 miles inland, and then decrease more gradually to a minimum of below 5 inches in the vicinity of Lake Eyre. This area is the driest part of Australia, and there have been protracted periods when the average there has been less than 3 inches.

Seasonal Distribution of Rainfall

Those areas of the State with the higher average annual totals also show a marked winter maximum of rainfall. From November to March the fall is slight, but is rarely completely absent. However, a high rate of evaporation during the summer means that in general these summer rains are not significant from the agricultural point of view.



The first significant falls generally arrive during April or May, and June, July and August are usually the wettest months, with rains tending to show a marked decrease during September and October.

By contrast the occurrence of rain over interior districts is quite erratic, but southern parts of the interior still exhibit a discernible trend for winter maxima. Records collected over the years from this northern half of the State show that heavy rains of up to 3 inches may occur in any month of the year, but on the other hand at least two or three months without any significant rain at all are experienced practically every year.

Average monthly rainfalls at seventeen selected recording stations are shown in the following table. The average number of rain days (*i.e.* days receiving one point or more of rain) are also shown.

Average Rainfall and Days of Rain: Selected Stations, South Australia

For all years of records to end of 1966

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
AVERAGE RAINFALL (Points)													
Adelaide	76	76	95	172	271	290	261	244	201	174	122	104	2,086
Berri	65	86	44	64	109	101	96	106	105	95	77	81	1,029
Ceduna	28	63	53	72	147	159	150	142	91	94	75	66	1,140
Clare	95	95	96	188	293	318	317	309	278	220	140	119	2,468
Keith	69	88	82	133	223	208	213	217	203	170	123	105	1,834
Kingscote	58	68	72	139	239	294	309	250	181	146	95	76	1,927
Kyancutta	45	69	51	85	142	153	166	161	121	110	95	85	1,283
Maitland	68	81	79	171	252	277	259	241	196	169	114	85	1,992
Mount Gambier ...	130	112	142	246	338	386	422	392	306	251	181	160	3,066
Oodnadatta	64	78	49	22	39	56	27	25	29	40	31	48	508
Port Augusta	59	66	66	75	102	107	77	88	88	91	71	63	953
Port Lincoln	52	59	72	138	227	298	306	258	192	140	91	72	1,905
Port Pirie	69	69	72	115	153	167	125	138	130	122	86	84	1,330
Stirling	149	142	170	372	563	711	642	609	487	385	241	192	4,663
Tailem Bend	69	81	83	109	170	161	157	161	156	146	111	111	1,515
Whyalla	68	87	65	68	108	101	86	97	96	98	85	84	1,043
Yongala	76	79	64	101	142	165	155	177	147	125	106	99	1,436
AVERAGE NUMBER OF DAYS OF RAIN (a)													
Adelaide	4	4	5	10	13	15	16	16	13	11	8	6	121
Berri	3	4	3	6	8	9	11	10	7	7	5	4	77
Ceduna	3	3	3	6	10	12	12	11	8	7	6	4	85
Clare	5	5	5	10	12	15	16	16	12	11	8	7	122
Keith	4	4	4	9	12	13	15	15	12	11	8	6	113
Kingscote	4	4	5	10	14	16	19	18	13	11	8	7	129
Kyancutta	4	4	4	7	12	12	14	14	10	9	7	5	102
Maitland	4	5	5	10	13	15	17	16	12	11	8	6	122
Mount Gambier ...	7	8	9	14	17	18	21	20	17	16	13	10	170
Oodnadatta	3	2	2	2	3	3	2	2	2	3	3	3	30
Port Augusta	3	3	3	5	7	7	10	9	6	6	6	4	69
Port Lincoln	4	5	5	11	15	17	19	19	13	12	8	6	134
Port Pirie	3	3	3	6	8	10	11	10	8	7	6	4	79
Stirling	6	7	7	13	15	17	18	18	15	14	11	9	150
Tailem Bend	4	5	4	9	12	13	13	13	11	10	8	6	108
Whyalla	3	3	3	5	6	7	9	8	6	6	5	4	65
Yongala	4	4	4	7	10	12	14	13	9	8	7	5	97

(a) Other than for Adelaide figures relate to standard 30 year period 1931-1960.

Rainfall Probability

Rainfall probability is the likelihood, expressed as a percentage, that a minimum rainfall will be received during a stipulated period.

A more detailed discussion, together with maps and with special reference to the cereal growing season was included on pages 6-9 of *South Australian Year Book* 1966.

Rainfall Intensity

Long sustained periods of intense rainfall are rare in South Australia. However, occasionally there are very intense falls lasting only a few minutes—for example in Adelaide several falls at a rate of more than 400 points per hour over a five minute period have been recorded. These would be thunderstorm rains, and can cause considerable damage to crops and to light or freshly worked soils.

The most notable falls of rain which have occurred within a period of twenty-four hours ending at 9 a.m. were at:

Ardrossan (18 February 1946)	8.10in
Carpa (18 February 1946)	7.83in
Hesso (18 February 1946)	7.36in
Wilmington (1 March 1921)	7.12in
Wynbring (28 February 1921)	7.00in

Other Yorke Peninsula towns besides Ardrossan also recorded over 7 inches on 18 February 1946. These, however, are very much below the 24-hour falls which have been recorded in tropical parts of Queensland and Western Australia. Croyhamhurst in Queensland once recorded 35.71 inches in one day, and more than twenty other centres in Queensland have had daily readings exceeding 24 inches.

Snow and Hail

The occurrence of snow in South Australia is infrequent and is mainly confined to the Mount Lofty Ranges and southern Flinders Ranges. Most falls are very light and do not persist long due to the relative warmth of the ground. Collated reports of snow in the Mount Lofty Ranges show a total of 116 days of snow experienced over a period of 124 years. While most falls have occurred during the months June to September, snow has been experienced as early as 25 April (1916) and as late as 3 December (1955).

Hail falls most frequently about the southern coasts and ranges during the winter. Further to the north, hail can be experienced with summer thunderstorms and some of the largest hailstones have been reported from northerly parts of the State. Tornadoes and tornadic squalls are, in almost all cases, accompanied by hail.

Floods

Various localised areas of South Australia are prone to flooding. However, most local flooding is associated with intense falls and consequently is of comparatively short duration. Exceptions have occurred in parts of the south-east of the State where due to topography and other soil factors, stretches of water can persist for days and even weeks.

Extensive rises in the River Murray levels have at times caused damage to levees and installations along the banks. During 1956, following an excessive snow melt in the Australian Alps, prolonged flooding was experienced in many areas adjacent to the main course.

Droughts

When dry conditions persist over wide areas for long periods of time, drought, the worst of all Australian climatic hazards, is experienced. The worst years in South Australia were 1863-67, 1896-98, 1901-03, 1913-16, 1926-30, 1939-40, 1943-45, 1959-62 and 1965 in the interior, and 1859-60, 1884-86, 1895-98, 1911-15, 1928-29, 1943-45, 1959 and 1967 in the settled areas.

The driest year in terms of actual rainfall was 1967, when an all-time low figure for the year of 10.11 inches was recorded in Adelaide. However, the 1914 drought is generally recognised as being the most severe experienced, and in that year districts where drought was almost unknown were seriously affected. The average wheat yield fell to only 1.41 bushels per acre, little more than one tenth of the yield in previous seasons. In places the River Murray was just a series of waterholes.

The northern areas suffer more frequent droughts than areas near the coast. In 1896 the track north-west of Port Augusta was closed to all traffic because of the drought stricken nature of the country. At about this time the drought was particularly severe in the north-east of the State, and this pastoral country was entering its eighth consecutive year of drought before relief rains fell in March 1902.

A more detailed discussion with special reference to rainfall deciles appeared in the *South Australian Year Book* 1967. Further details of droughts appear in the Bureau of Meteorology publications *Droughts in Australia* by J. C. Foley (Bulletin No. 43) and *Rainfall Deciles as Drought Indexes* by W. Gibbs and J. V. Mahr (Bulletin No. 48).

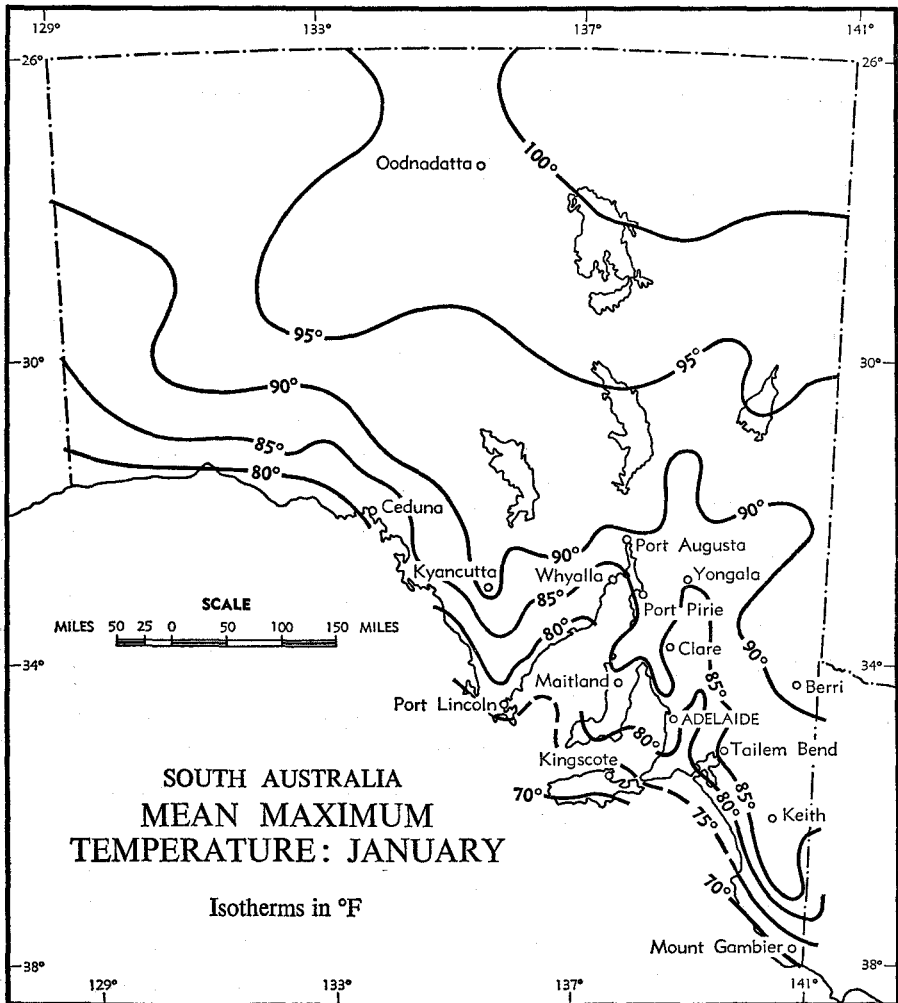
TEMPERATURE

Seasonal Temperature Conditions

Temperature is normally recorded under standard conditions in a Stevenson screen. Isotherms of the average maximum temperatures in a mid-summer month (January) and of the average minimum temperature in a mid-winter month (July) are shown on Maps 2 and 3 respectively. The isotherms are more or less parallel to the coastline but the cooling effect associated with higher altitudes of the Mount Lofty and Flinders Ranges is clearly shown.

From December to February it is generally warm to hot throughout the State but sea breezes frequently bring some relief to the coastal districts. In locations more than fifty miles inland maximum daily temperatures usually exceed 90°F and are quite often over 100°F. In general, areas to the north of the 90°F isotherm on the January map average more than twenty days annually during which the maximum temperature exceeds 100°F; while only on the extreme south-east coastal fringe and on Kangaroo Island does the average number of such 'century days' fall below five per year. Air masses prevalent at this time of the year are relatively dry and hence cooling during the night is marked—a fall of 20°F to 30°F from day to night is usual, making the nights reasonably pleasant.

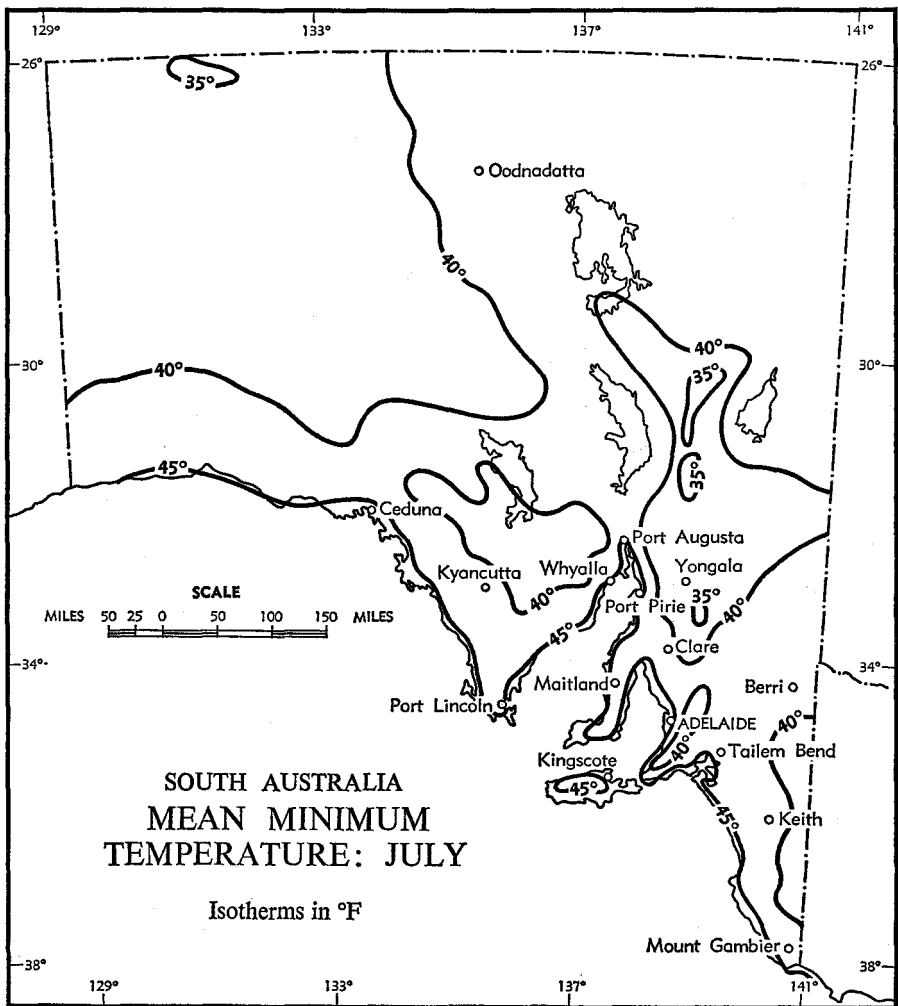
During March temperatures begin to fall and continue to do so during April and May, the first frosts of the year often being experienced during this period. The three coldest months are June, July and August, with the coldest areas along the highlands. In those parts of the State east and south-east of the ranges, the mean temperature for the latter months is near or just below 50°F , and these low temperatures cause vegetative growth to become very slow, although it does not cease altogether.



MAP 2

In the spring months, September to November, with gradually rising temperatures and longer hours of sunshine, crops and pastures grow rapidly. In this period severe frosts are sometimes experienced and these can cause considerable damage to fruit crops during the bud, flower, and small fruit stages.

When a pressure distribution causes very dry and warm air from the rapidly heating interior to flow over the State for two or three consecutive days, developing crops can be seriously affected by the desiccating effect of this air mass.



MAP 3

Monthly mean maximum and minimum temperatures at seventeen selected recording stations within the State are shown below. These are based on records ranging from eight years at Maitland to sixty-four years at Port Augusta.

Mean Maximum and Minimum Temperatures: Selected Stations, South Australia

Recording Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
MEAN MAXIMUM (°F)													
Adelaide	84.8	85.7	81.3	73.0	66.8	61.0	59.9	62.3	66.8	72.5	78.1	82.6	72.9
Berri	87.7	86.3	82.3	72.5	66.3	60.4	59.9	63.4	69.5	74.5	80.7	85.8	74.1
Ceduna	81.5	79.1	79.9	73.5	67.9	64.1	62.6	65.5	69.7	72.9	76.1	80.2	72.7
Clare	84.4	84.9	80.2	70.4	63.0	56.8	55.7	58.6	63.9	70.6	77.0	82.0	70.6
Keith	87.0	82.3	80.9	70.7	64.1	59.3	58.6	61.0	66.7	70.2	76.3	82.1	71.6
Kingscote	72.5	73.0	70.8	66.5	62.7	58.8	57.6	58.2	60.8	64.3	67.6	70.7	65.3
Kyancutta	90.7	88.9	86.4	76.8	70.7	63.8	62.9	65.9	72.0	77.2	83.0	88.4	77.2
Maitland	84.5	85.0	79.0	72.0	65.0	60.0	58.5	61.5	66.0	71.5	77.5	82.0	71.9
Mount Gambier ...	74.2	75.9	72.7	66.5	61.4	57.0	56.2	58.1	61.1	65.0	68.3	71.9	65.7
Oodnadatta	98.5	96.4	91.4	81.9	73.3	67.1	66.3	70.6	78.8	84.9	91.6	96.9	83.1
Port Augusta	89.5	89.5	85.2	77.4	70.3	63.6	62.8	66.5	72.4	78.3	83.8	87.7	77.3
Port Lincoln	77.4	77.7	74.8	70.3	65.8	61.3	60.2	61.6	64.6	68.2	71.8	75.2	69.1
Port Pirie	89.2	88.8	85.6	76.6	69.2	62.8	61.7	65.0	71.3	76.6	82.6	86.8	76.3
Stirling	75.6	77.1	73.1	64.3	58.3	52.5	51.3	53.8	58.0	63.1	68.2	72.8	64.0
Tailem Bend	84.5	82.5	79.7	72.0	66.0	56.0	59.8	61.8	67.9	71.0	76.2	81.0	71.9
Whyalla	83.6	84.1	80.6	74.1	68.9	62.9	62.3	64.7	68.9	74.6	78.9	82.8	73.9
Yongala	85.9	85.8	80.7	70.5	62.4	55.5	54.5	57.6	63.8	71.2	78.3	83.5	70.8
MEAN MINIMUM (°F)													
Adelaide	61.0	61.8	59.1	54.4	50.8	46.6	45.4	46.2	48.3	51.7	55.4	58.9	53.3
Berri	59.1	58.9	56.0	50.0	46.0	42.7	41.5	42.6	45.7	49.8	54.0	57.6	50.3
Ceduna	58.8	59.3	56.4	51.0	46.9	43.5	43.8	44.2	47.0	50.0	53.8	57.7	51.0
Clare	56.1	56.7	52.8	46.8	42.6	39.6	38.1	38.9	41.2	45.2	49.9	54.1	46.8
Keith	53.7	52.7	50.2	47.5	44.3	42.5	40.2	41.1	43.3	46.0	48.6	51.9	46.8
Kingscote	58.3	59.5	58.0	54.5	51.9	49.1	47.6	47.3	48.7	50.8	53.7	56.7	53.0
Kyancutta	57.4	56.7	53.7	48.4	44.4	41.2	40.6	41.1	43.3	46.7	51.4	55.3	48.4
Maitland	58.0	58.5	56.5	51.5	47.5	45.0	43.5	44.0	45.0	47.5	51.0	54.5	50.2
Mount Gambier ...	53.5	54.8	52.4	49.5	46.4	43.5	42.4	53.1	45.1	46.9	49.6	52.0	48.3
Oodnadatta	71.6	71.0	66.0	57.3	49.9	44.3	42.6	44.8	51.3	58.3	64.3	69.7	57.6
Port Augusta	65.3	66.0	62.1	55.7	50.0	45.9	43.9	45.8	49.5	54.8	59.7	63.5	55.2
Port Lincoln	58.5	59.4	57.5	54.1	50.9	48.1	46.4	46.4	47.7	50.1	53.4	56.6	52.4
Port Pirie	62.6	63.1	60.3	54.7	50.6	46.4	45.4	46.3	49.0	52.9	57.5	60.9	54.1
Stirling	52.0	53.2	50.9	47.2	44.7	41.7	40.7	41.2	43.0	45.1	47.7	50.5	46.5
Tailem Bend	56.2	56.8	53.4	49.2	46.8	42.9	41.5	42.7	44.6	48.0	51.2	54.5	49.0
Whyalla	63.8	65.0	62.0	55.7	50.5	47.0	43.9	45.8	49.5	53.9	58.6	62.1	54.8
Yongala	55.8	56.3	51.7	45.1	40.9	37.6	36.1	36.9	39.4	43.4	49.0	53.7	45.5

The highest temperature recorded in South Australia was 123.2° at Oodnadatta on 2 January 1960, and the lowest 17.4° at Yongala on 16 June 1959.

HUMIDITY

'Relative humidity' at a particular temperature is the ratio of the actual vapour pressure to the saturated vapour pressure (at that temperature) expressed as a percentage. Since relative humidity depends not only on the actual water vapour content of the air, but also on air temperature, there is a tendency for highest relative humidities to be associated with low temperatures during the early morning hours, and conversely, the lowest relative humidity values tend to occur during the warmest part of the afternoons when measurements of under 20 per cent are not uncommon.

The average index of mean relative humidity has been derived from the ratio of the average 9 a.m. vapour pressure to the saturation vapour pressure at the average mean temperature. Being thus related to the mean temperature this value of relative humidity is a good approximation of the daily mean.

With an average index of mean relative humidity of under 35 per cent in summer increasing to about 50 per cent in winter, the far northern parts of the State experience the lowest values of relative humidity in South Australia. By comparison, most southern parts of the State have an average index of mean relative humidity of about 45 per cent to 55 per cent in summer, increasing to about 70 per cent to 80 per cent in winter.

SUNSHINE AND CLOUD

The annual average sunshine total (as determined from records of sunshine and average cloudiness) ranges from about 2,000 hours along parts of the southern coastal fringe to 3,500 hours near the northern border of the State. Adelaide has an average of 2,508 hours a year.

December and January tend to be the sunniest months with daily averages reaching a maximum of about ten and a half hours over interior districts. During the June and July winter months daily averages are still as high as seven hours in the far north interior, but over the southern coastal fringe the daily average of just over eight hours for summer is reduced to about three hours during winter.

WIND

During the summer months winds from the southern quadrants are the most prevalent and a well defined sea breeze is common along the whole of the coastal fringe from October right through to about April and May. During the winter months the north-westerly predominates, but the proportion of west to south-west winds is also relatively high.

South Australia is not subject to the type of sustained wind storms associated with tropical cyclones as in Queensland and tropical Western Australia. However, gales do occur from time to time along the coast during the winter and cause minor damage to buildings and foreshore works. Probably the most noteworthy storm was on 11 April 1948 when the wind averaged over 40 mph for six hours in central and south-eastern districts, and the naval frigate *Barcoo* was grounded at Glenelg and the Glenelg jetty was wrecked.

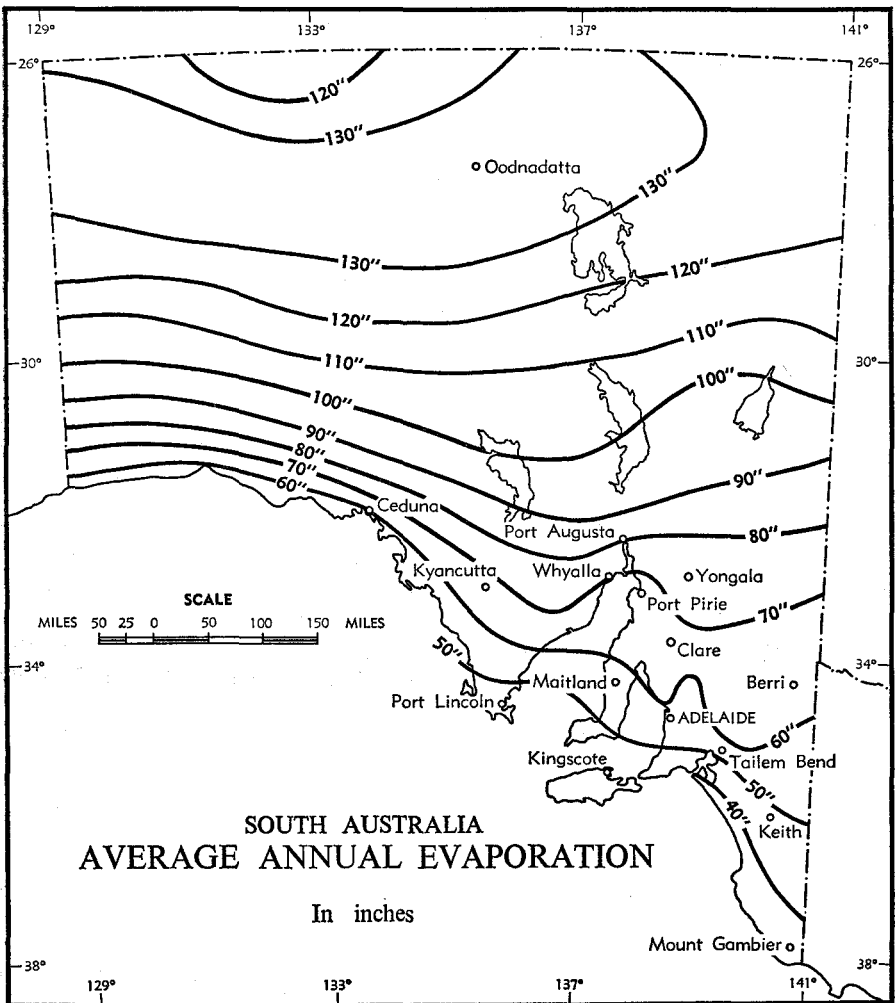
Most violent wind squalls are associated with thunderstorms and usually last only a few minutes. It was during such squalls that the highest wind gusts were recorded in South Australia—92 mph at Leigh Creek on 3 December 1953, and also at Adelaide on 13 July 1964.

EVAPORATION

In South Australia most measurements of evaporation have been made with tanks, each 3 feet internal diameter and 3 feet deep, sunk into the soil so that the rim is only an inch or so above the surface.

However, early in 1967 a change-over to the standard American Class A pan was made. These pans, 4 feet in diameter and 12 inches deep, are placed above ground level on wooden stands. Comparative readings are being made between these new pans and the older sunken tanks to determine the differences, if any, between the two methods. Figures for the evaporation for the new pans will not be available for several years.

The annual average evaporation using the sunken tank varies from under 40 inches along the south-east coastal fringe to more than 130 inches over a large area around and to the west of Oodnadatta in the far north (see Map 4). About half the area of the State has an evaporation rate exceeding 100 inches per annum, and this high rate is all the more significant when it is considered that the average annual rainfall over most of the northern half is less than 6 inches. A critical survey of the evaporation network and methods of observation, together with tabulations of the results of Australian observations appears in the Bureau of Meteorology publication *Evaporation in Australia* (Bulletin No. 44).



MAP 4

CLIMATE OF ADELAIDE

The longest continuous series of weather observations in the Southern Hemisphere started in Adelaide in November 1836 when Sir George Kingston commenced rain gauge readings at his property on the corner of Grote Street and West Terrace. Unfortunately, the earliest figures were mislaid and records are available only from the beginning of 1839. No other regular observations were made until Sir Charles Todd arrived to fill the post of Superintendent of Telegraphs and Government Astronomer in 1856. During the first year or two, observations were made at his private residence in Adelaide and, for some months, in Government House grounds. In May 1860 the Observatory on West Terrace was completed and the instruments were moved to that site.

Temperature records at Adelaide date back to 1858 when readings were first taken from a thermometer placed in a screen known as a Greenwich Stand which failed to protect the thermometer fully from reflected radiation. In 1887 a new series of readings using a standard Stevenson Screen was introduced and this showed maximum temperatures during the warmer months to be slightly lower on average, although most readings were not significantly affected. Both screens were in continuous operation until 1948 when use of the Greenwich Stand was discontinued. For over 100 years the observational site at Adelaide has remained practically unchanged. Minor shifts occurred in 1940 and 1962 but these were within 100 yards of the original observatory site.

Adelaide is the driest of Australia's capital cities, having less rainfall and a lower relative humidity than any other capital. Summer maximum temperatures are high and the record of 117.7°F in the Greenwich Stand on 12 January 1939 is the highest recorded in any of the capital cities.

Temperature

In the summer months, maximum temperatures frequently exceed 90°F and from time to time 'heat waves', with readings at or near 100°F for several consecutive days, are experienced. The outstanding heat wave was in January 1939 when fourteen days out of fifteen exceeded 90°F and of those fourteen days nine exceeded 100°F. During this heat wave the record temperature of 116.3°F recorded on 26 January 1858 was exceeded, first on 10 January 1939 when the temperature reached 116.9°F and then two days later on 12 January when the highest ever temperature of 117.7°F was recorded.

July is the coldest month, when the mean maximum is only 59°F with the extreme lowest minimum being 32°F on 24 July 1908. August is only slightly warmer than July, but after August steadily rising temperatures are experienced during the spring months.

Rainfall

Adelaide's summer rainfall is light and unreliable. The average monthly fall from January to March is under an inch and completely rainless months in this period are not uncommon. In fact, each of the five months December to April has at some time been recorded as completely dry, and in the period January to March 1893 there were sixty-nine consecutive rainless days. On the other hand, heavy rain is occasionally experienced at this time of the year and on 7 February 1925 rainfall was 5.57 inches—a record for one day. Each month from May to September averages over 2 inches and in this period the rain is fairly reliable. June is the wettest month, but the average is still under 3 inches for the month. The 129-year annual rainfall average is 20.77 inches, and annual totals have ranged from a low of 10.11 inches in 1967 to a high of 30.95 inches in 1851.

Climatological Data, Adelaide

(1) Temperature and Relative Humidity

Month	Temperature					Relative Humidity (9 a.m.)		
	Maximum		Minimum		Mean	Mean	Highest Monthly Mean	Lowest Monthly Mean
	Mean	Highest Recorded	Mean	Lowest Recorded				
Years of Record	111	111	111	111	111	100	100	100
	°F	°F	°F	°F	°F	%	%	%
January ..	85.4	117.7	61.4	45.1	73.4	40	59	29
February ..	85.0	113.6	61.7	45.5	73.3	43	57	30
March	80.5	110.5	59.0	43.9	69.8	47	58	29
April	72.9	98.6	54.6	39.6	63.7	56	72	37
May	65.7	89.5	50.4	36.9	58.0	67	76	49
June	60.5	78.1	46.8	32.5	53.7	75	84	63
July	58.9	74.0	44.9	32.0	51.9	76	87	66
August	61.7	85.0	46.0	32.3	53.8	70	78	54
September ..	66.2	95.1	48.1	32.7	57.2	60	72	44
October	71.8	102.9	51.5	36.1	61.7	51	67	29
November ...	77.6	113.5	55.2	40.8	66.5	44	58	31
December ...	82.3	114.6	58.8	43.0	70.6	40	56	31
Year ..	72.4	117.7	53.2	32.0	62.8	53	87	29

(2) Rainfall and Wind

Month	Rainfall				Wind			
	Mean	Highest During Period	Highest in One Day	Mean Days of Rain	Average Speed	Highest Gust	Prevailing Direction	
							9 a.m.	3 p.m.
Years of Record	129	129	129	129	15	51	51	51
	In	In	In	No.	MPH	MPH		
January ..	0.76	3.31	2.30	4	7.8	72	SW	SW
February ..	0.76	6.09	5.57	4	7.5	66	NE	SW
March	0.94	4.59	3.50	5	6.9	78	S	SW
April	1.71	5.81	3.15	10	6.9	81	NE	SW
May	2.70	7.75	2.75	13	7.0	70	NE	NW
June	2.88	8.58	2.11	15	7.4	67	NE	N
July	2.61	5.44	1.75	16	7.3	92	NE	NW
August	2.43	6.20	2.23	16	7.9	75	NE	SW
September ..	2.01	5.83	1.59	13	8.0	69	NNE	SW
October	1.73	5.24	2.24	11	8.4	75	NNE	SW
November ...	1.21	4.45	2.96	8	8.4	81	SW	SW
December ...	1.03	3.98	2.42	6	8.2	75	SW	SW
Year ..	20.77	30.95	5.57	121	7.6	92	NE	SW

(3) Other Conditions

Month	Mean Daily Sunshine	Clear Days (a)	Mean Amount of Cloud (b)	Days of Fog	Days of Lightning	Amount of Evaporation	Vapor Pressure 9 a.m.	Mean Barometric Pressure (d)
Years of Record	86	30 (c)	30 (c)	68	96	95	30 (c)	111
	Hours	No.		No.	No.	In	In	Mb.
January ..	9.9	12.9	3.6	0.0	2.1	9.29	0.327	1,013.3
February ..	9.3	11.2	3.7	0.0	1.5	7.52	0.352	1,014.3
March	7.8	10.6	4.0	0.0	1.7	6.26	0.332	1,017.2
April	5.9	7.2	5.2	0.0	1.5	3.78	0.329	1,019.9
May	4.8	4.9	5.8	0.4	1.5	2.30	0.313	1,020.1
June	4.2	4.1	6.1	1.1	1.5	1.47	0.294	1,019.7
July	4.3	4.3	6.0	1.3	1.5	1.47	0.282	1,019.9
August	5.2	5.6	5.5	0.6	1.8	2.09	0.282	1,019.1
September ..	6.1	5.8	5.3	0.2	1.8	3.18	0.289	1,017.6
October	7.2	5.7	5.3	0.0	2.7	5.03	0.287	1,015.8
November ...	8.5	7.2	4.9	0.0	3.0	6.78	0.292	1,015.1
December ...	9.4	9.5	4.2	0.0	2.2	8.62	0.322	1,013.3
Year ..	6.9	89.0	5.0	3.6	22.8	57.79	0.308	1,017.1

(a) With less than two-tenths cloud.

(b) Scale 0 (clear) to 10 (overcast) at 9 a.m., 3 p.m. and 9 p.m. daily.

(c) Standard 30-year normal, 1911-40.

(d) Mean of 9 a.m. and 3 p.m. readings corrected to sea-level.

Other Conditions

Relative humidity in Adelaide is the lowest of all capital cities in Australia and is at its lowest in January when the average 9 a.m. reading (which approximates the average for the whole twenty-four hours) is 39 per cent. This low value of the relative humidity explains why the summer in Adelaide, even during a heat wave, is not unduly severe for personal comfort. In fact, the relative humidity is very low for most months of the year, only becoming higher in winter, with the average at 9 a.m. reaching as high as 75 per cent in June and July.

Adelaide is not subject to violent sustained wind storms. The prevailing wind during the day in summer is a south-westerly sea breeze which is well defined throughout the months October to April. Another common wind during summer, known locally as the 'gully wind', blows from the east or south-east out of the Adelaide hills (more particularly at night) and becomes very strong and gusty at times. In winter the prevailing wind during the day is north-westerly with a high proportion of south-westerlies.

WEATHER CONDITIONS IN SOUTH AUSTRALIA: 1966 AND 1967

Autumn 1966

Rainfall was generally below normal throughout the State, apart from the western districts, which showed a surplus.

Temperatures were about normal. A few early season frosts were recorded in April.

Winter 1966

Rainfall over most of the State was near to or above normal. The main exception was the north-eastern parts of the State, where a deficit was recorded. This area was still under the influence of the drought.

Temperatures were below normal over most of the State, by one to three degrees, even though there were no cold spells during the season.

Spring 1966

Spring rains were below normal over all the State except for a coastal strip in the western and south-east districts. The eastern parts of the State were very dry, with some parts receiving only half their normal rain.

Temperatures on the whole were about normal for the State. A widespread warm spell at the end of November, helped push mean maxima above normal.

Summer 1966-1967

Apart from a few small areas in the far north and the north-west, most of the State recorded well above average summer rains.

Local flooding was general at times, with rail traffic, particularly on the Trans-Australian and Central Australia railways, being badly held up.

Temperatures were generally about average or just below normal.

Autumn 1967

Apart from small sections in the north of the State, rainfall during autumn, in contrast to summer, was well below average, with some deficits of up to 8 inches being recorded.

Due to the general lack of clouds and rains, temperatures tended to be above average.

Winter 1967

Similar to autumn, the winter rainfall over most of the State was markedly below average. August provided a return to more of a winter type weather pattern but this effect was far outweighed by the dry June and July.

Temperatures were about average to a little below normal.

Spring 1967

Very markedly below average rainfall with most of the spring rain being recorded in September. The State as a whole received 66 per cent of average rainfall.

Temperatures tended to be about average over the southern parts of the State. However, the northern parts showed a slight rise on average.

Summer 1967-1968

Above average rainfall over parts of the State, but not the interior, south-east or western districts. Most rain fell during January and February, with some stations reporting more than their average annual total for the two months. Floods and washaways severely restricted operations on both the Trans-Australian and the Central Australian railways.

Temperatures showed a marked increase on average over the State as a whole.

1.3 NATURAL RESOURCES

MINERALS

Iron ore, South Australia's most important mineral, is found in the Middleback Ranges of upper Eyre Peninsula. These ranges which lie to the west of the port of Whyalla and extend discontinuously with broad erosion gaps, from Iron Knob in the north to Iron Duke in the south, a distance of nearly forty miles, are composed primarily of iron-rich rocks and contain the only known deposits of high grade ore in the State. Several deposits of low grade ore have been located on lower Eyre Peninsula.

Barite (barytes) occurs throughout the Adelaide System rocks, in the Mount Lofty and Flinders Ranges, in the Olary district and elsewhere.

By far the largest part of Australian reserves of gypsum are located in South Australia. The deposits have in general been formed in coastal basins, the largest of these occurring at Lake MacDonnell, Stenhouse Bay and on Kangaroo Island. Other deposits, mainly of seed gypsum, are found inland at Moonabie, Lake Fowler, Cooke Plains and along the River Murray.

Conditions in South Australia are ideal for the production of salt from the gulf waters by solar evaporation. Large solar salt works are located at Dry Creek (near Adelaide), Port Pirie (Gulf St Vincent) and Whyalla. Salt is also harvested from several saline lakes, in particular Lake Bumbunga and Lake Fowler.

The opal fields at Coober Pedy and Andamooka supply a very large proportion of the precious opal produced in Australia. The value of opal from South Australia exceeded \$3.6 million in 1966. Most of this is exported to Japan, Hong Kong and the United States.

Pyrite from the very large deposit near Nairne has been used in the manufacture of sulphuric acid for the fertiliser industry since 1955.

South Australia supplies the bulk of Australia's talc requirements, the principal occurrences being at Mount Fitton, in the northern Flinders Ranges, and in the Gumeracha district. Other deposits occur at Tumby Bay and in the Barossa Valley near Lyndoch and Williamstown.

South Australia, deficient in bituminous coal resources, has one deposit of sub-bituminous coal at Leigh Creek. This field supplies two million tons of coal annually for electric power generation at Port Augusta. Lignite deposits at Moorlands and Inkerman-Balaklava are undeveloped.

Limestone and dolomite together form one of the State's most abundant natural resources. The principal deposits being exploited at present are: limestone at Rapid Bay, Penrice, Angaston and Klein Point; limesand at Coffin Bay, and dolomite at Ardrossan. Large reserves of both limestone and dolomite have been established at Brachina in the Flinders Ranges.

South Australia possesses a wide variety of clays including a number of special varieties, the most noteworthy being ball clay at Woocalla, china clay at Mount Crawford and fire clay at Birdwood, Littlehampton, Tea Tree Gully, Booleroo Centre and Lincoln Gap.

In the past, deposits of other minerals have been discovered and exploited until the fields were worked out. The most important of these minerals was copper ore, found initially at Kapunda and at Burra in the 1840s and later (and more extensively) in the Moonta-Wallaroo area. These fields played an important part in the development of the colony in the nineteenth century. Uranium deposits were worked extensively at Radium Hill in the 1950s, while less important deposits of gold, silver-lead ores and manganese ore have been exploited over past years.

The finding of natural gas at Gidgealpa is probably the most exciting of the State's recent mineral discoveries, while elsewhere the presence of molybdenite, nickel and further lead ore deposits has been recorded.

Locations of mineral deposits referred to above are shown on Map 5 on page 19.

UNDERGROUND WATER

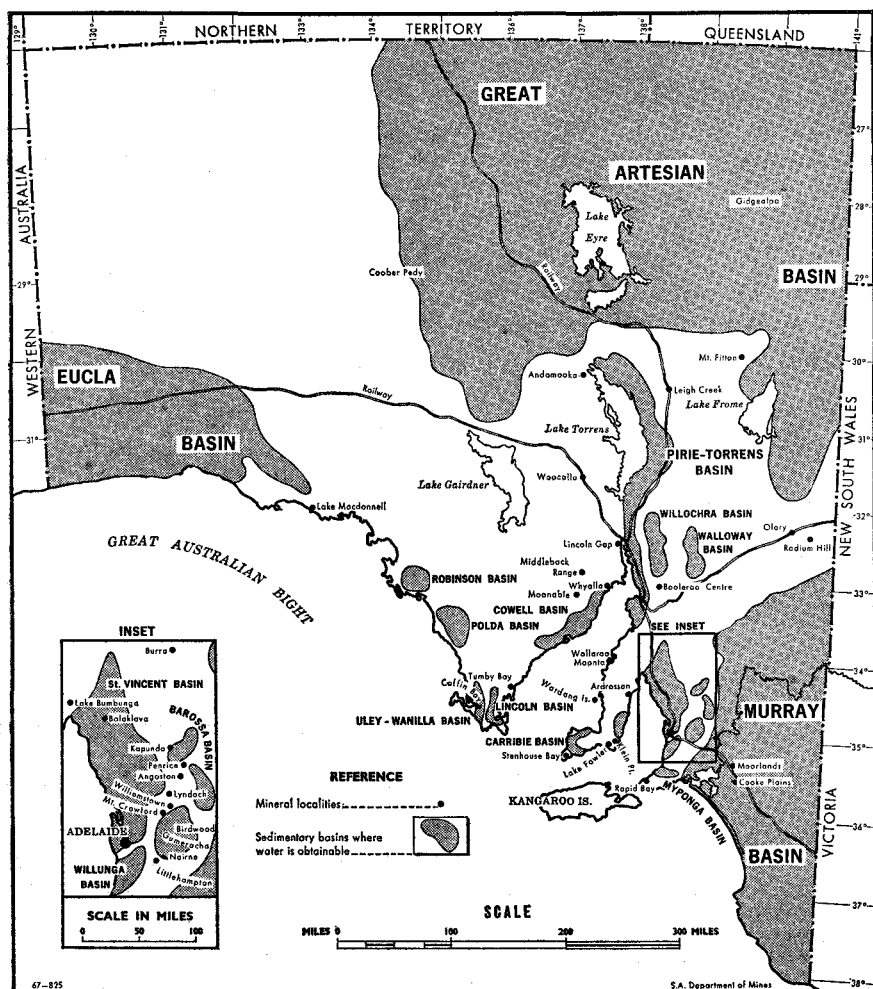
South Australia is a State not endowed with a generous rainfall. Only the southern portion of the State, approximately that part south of Port Augusta, receives more than 10 inches of rain annually of which only quite small areas of the south-east and the Adelaide Hills have an annual rainfall exceeding 25 inches. The northern part of the State, comprising perhaps three-quarters of the total area, is largely arid with an average annual rainfall of less than 10 inches. As a consequence South Australia is notably deficient in rivers. There is only one large permanent river, the River Murray, flowing through it while the few streams rising in the Flinders and Mount Lofty Ranges are short and seasonal in flow.

Water supply for the metropolitan area of Adelaide is derived from reservoirs in nearby ranges and from the River Murray. Reticulation of surface supplies now covers most of the Adelaide Plains, Yorke Peninsula and portions of Eyre Peninsula. In addition there are a number of small areas whose reticulated supplies are derived from groundwater sources by means of bores.

Groundwater suitable for various purposes is available in many areas. Pressure water, also referred to as artesian water, is generally confined to the several sedimentary basins located throughout the State. The largest of these, the Great Artesian Basin, 660,000 square miles in area, of which 120,000 square miles lie

in the north-east part of South Australia, covers nearly one-third of the State. The intake area for the principal water-bearing bed lies along the western margins of the highlands in eastern New South Wales and Queensland. Natural outlets for the water are mound springs which, in South Australia, lie to the west and south of Lake Eyre. Deep bores are necessary to tap the waters of the main aquifer basin in this State from which very large flows have been obtained. The water is generally too saline for any form of irrigation however and its use is confined to stock watering.

SOUTH AUSTRALIA MINERAL RESOURCES AND ARTESIAN WATER



MAP 5

The Murray Basin covers 28,000 square miles in South Australia and extends into Victoria and New South Wales. The southern and central portions of the basin contain waters suitable for all purposes while the water quality deteriorates steadily in a north and north-westerly direction from the southern intake area. Very large yields can often be developed from the bryozoal limestone aquifers at shallow depths. The greater part of the water available is used for stock purposes.

The Eucla Basin in the south-west of the State lies partly in South Australia and partly in Western Australia. Although the water quality is poor some is used for stock purposes. Because of the low fertility of the area the basin is of little importance.

The Adelaide Plains Basin is part of the larger St Vincent Basin, lying between the Mount Lofty Ranges and the shores of the gulf. Good quality waters are obtainable in certain portions of this basin which is heavily used for market gardening on the northern Adelaide Plains. The danger of serious depletion of the aquifers by overpumping in this area has been recognised and use is now subject to government control. In the Adelaide metropolitan area ground-water is used from time to time to supplement reticulated reservoir water. Bores constructed for this purpose have yielded up to 15 million gallons per day.

The Pirie-Torrens Basin is a long narrow basin lying west of the Flinders Ranges between Port Broughton and Port Augusta and extending north to the northern end of Lake Torrens. The variable quality of the water from this basin however limits its use mainly to stock watering. The high salinity of the Cowell Basin on the west coast of Spencer Gulf renders it little used and of minor interest only. Several small basins, Wallowing, Willunga, Myponga and others are utilised to various extents for stock and pastoral uses.

Groundwater outside the well defined sedimentary basins is often obtainable in useful quantity but its location is not so readily defined. Many bores in folded rocks of the Mount Lofty Ranges and elsewhere provide water supplies for towns, farms and for domestic purposes. Much of the extensive water reticulation of Eyre Peninsula is derived from shallow groundwater basins.

It is estimated that the usage of underground water in South Australia exceeds 100 million gallons daily for all purposes. The exploration for, and development of, underground water resources is a continuing responsibility of the Department of Mines which provides the services of geologists and has an extensive drilling organisation.

SOILS

General

There are many kinds of soils in South Australia ranging from free-flowing sands such as the coastal dunes, to the shrinking and swelling clays of which good examples are found near Bordertown and Tanunda, whilst some show a marked texture contrast with depth, such as the sand over clay soils of the South-East. Not only do these soils differ in their visible attributes, such as their colour, texture, stoniness and degree of slope, but also in the properties, largely unseen, of their chemistry, their relations to air and water, and to the micro-organisms which form the soil flora and fauna.

Undoubtedly the most widespread deficiency is phosphorus. Low phosphorus contents are typical of South Australian soils. The gravelly ironstone soils of Kangaroo Island and parts of the Adelaide Hills are among the most impoverished

in the world, containing only between 5 and 40 parts per million of phosphorus in their surface soils, whereas the red-brown earths in their natural state contained 200 to 300 parts per million. These figures do not compare favourably with those for the soils of Great Britain, in which 600 parts per million of phosphorus is common. However, soils are changed by the treatment they get, and the phosphorus contents of some areas of some soils have been so built up over the years that their residual effect is now sufficient to produce a good cereal crop without the further addition of superphosphate.

On the other hand, prolonged clean cultivation in vineyards and frequent cropping in wheatland areas causes deterioration of the structure of surface soils and depletion of nitrogen. The latter deficiency can be remedied by the proper use of legumes, such as medics and clovers, during the pasture phase of the crop rotation in wheatlands. Nitrogen is one of the most mobile of the nutrient elements in soil and is highly susceptible to differences in management.

Some soils which seem to be unique to Australia, such as the mallee soils or calcareous earths are well represented in this State. The irrigated horticultural settlements established on them along the River Murray have been notably successful, but they are susceptible to wind erosion where dry land arable farming is practised.

It is not possible in this limited space to discuss or describe many important features that affect plant growth, such as acidity and alkalinity, supply of trace elements and so on. Information about these and their importance in different localities can be obtained from the South Australian Department of Agriculture and in a bulletin published by the Department entitled *Soils of South Australia's Farm Lands*. The extent of country covered by the different soil groups is illustrated by the Atlas of Australian Soils which is being compiled by the Division of Soils, C.S.I.R.O. The first sheet of this atlas, published in 1960, includes the areas of higher rainfall country in South Australia, and refers to the many soil surveys made in this State.

Building Soils

The building soils of Adelaide and environs are of varying qualities as to stability and bearing capacity. In certain locations shrinking and swelling soils have resulted in considerable foundation failures. These soils, commonly known as Bay of Biscay soils, occur at their worst in areas adjacent to the Mount Lofty Ranges. The best building soils are found in areas along the coast and in a small area to the east of the city.

1.4 FLORA AND FAUNA

FLORA

A broad division of vegetation types is formed by Goyder's Line which represents approximately the 10-inch annual isohyet. To the north of the Line, in the Eremaean Province, lies about 80 per cent of the State, experiencing arid to desert conditions where short, erratic growing seasons prevail. Areas to the south, in the temperate region, have climates geared to an equable seasonal cycle of winter rainfall and summer drought.

Eremaean Areas

These vast areas of inland South Australia are not well known botanically. Vegetation there ranges structurally from low layered woodland, through shrub savannah, to exceedingly sparse vegetation of very low stature (shrub steppe). As in arid situations elsewhere about the world, therophytes are well represented and after rain these may transform the scene with prolific but transient herbage. The woody perennial vegetation is of genera adapted to the dry conditions. Predominant trees and shrubs are frequently species of *Acacia* (mulga, myall, ironwood) *Cassia*, *Grevillea* etc. but other genera (*Hakea*, *Myoporum*, *Casuarina*, and less frequently *Eucalyptus*) are often involved. Some species such as the desert oak achieve a stature comparable with large temperate zone trees. Chenopod shrubs (Blue Bush, Salt Bush) are often prominent in the shrub stratum, and *Triodia* (Porcupine Grass) in the herbaceous cover, but there is considerable diversity in the Eremaean flora. The development of cattle and sheep grazing industries and the overstocking for long periods and especially in drought periods has led to the depletion of and alteration to much of the vegetation of this area.

Temperate Areas

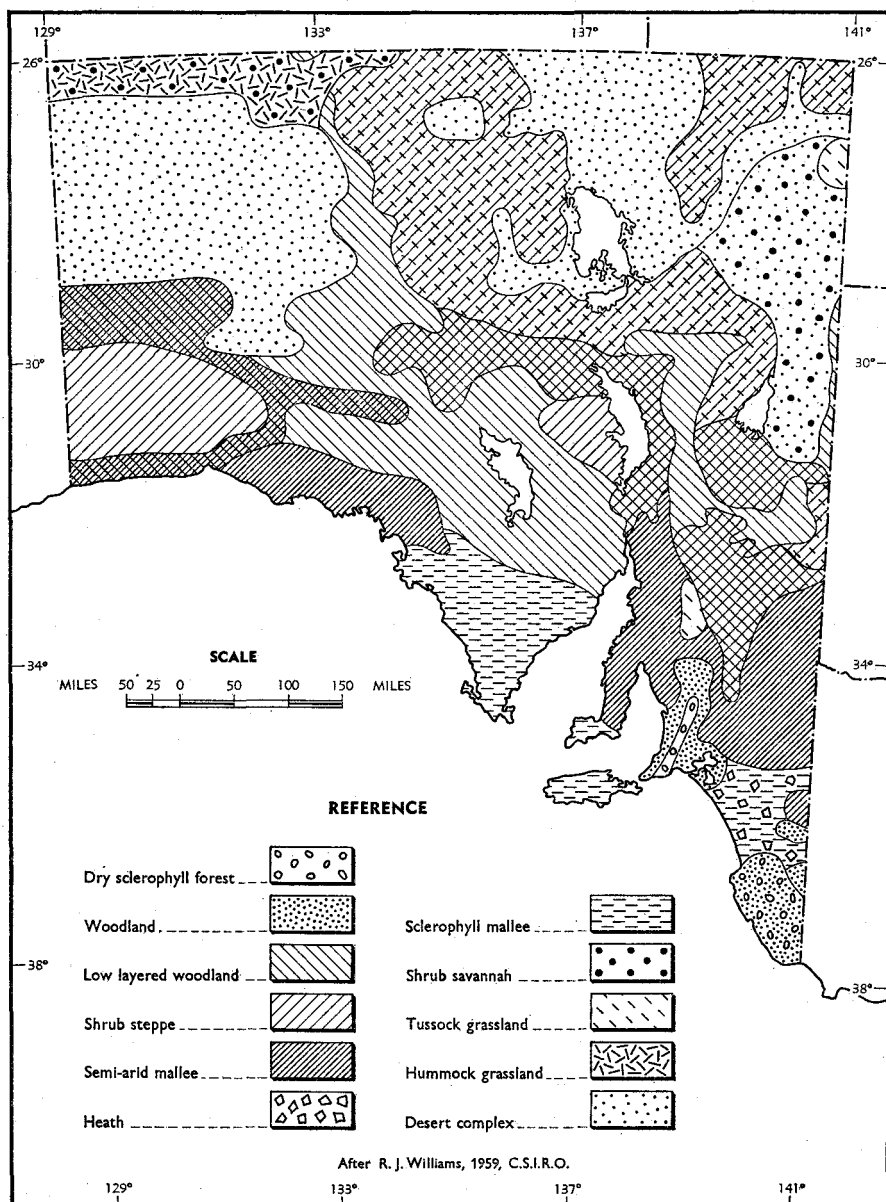
In general, vegetation characteristics of the temperate zone of South Australia succeed each other in a fairly predictable sequence from the highest to the lowest rainfalls. Under the high and intermediate rainfalls (about 30-40 inches) dry sclerophyll forest is well developed, particularly in the Mount Lofty Ranges, where it constitutes a western outlier of the dry sclerophyll forest system occurring in eastern Australia. *Eucalyptus obliqua* and *Eucalyptus baxteri* predominate, but other species such as *Eucalyptus rubida* (the candlebark) are sometimes prominent. Such forest is replete with lesser trees *Acacia melanoxylon* (blackwood) at a lower canopy level and a rich array of sclerophyllous shrubs and sub-shrubs beneath. Most species have generic analogues in equivalent dry sclerophyll forests of both eastern and western Australia. Sclerophyll forest in South Australia has been cut over extensively and is invaded by aliens. Lower rainfall areas down to about 15 inches per annum supported mainly savannah woodlands and layered woodlands with South Australian bluegum (*Eucalyptus leucoxylon*) and peppermint gum (*Eucalyptus odorata*) as predominant trees. Associated trees included river redgum (*Eucalyptus camaldulensis*) especially along river and creek frontages, sheoak (*casuarina* spp.), and manna gum (*Eucalyptus viminalis*). In these vegetations the grass stratum is expressed and the shrub stratum rather suppressed. These vegetations are now almost entirely replaced by agricultural areas.

In some places on the lower rainfall extreme of the temperate zone, variant vegetations occurred. These included substantial conifer (*callitris* spp.) and conifer-eucalypt forests and woodlands (particularly in the Flinders Ranges), and areas of pure savannah, as once occurred about Burra.

The simple division of the State into Eremaean and temperate areas needs qualifying on two counts:

(i) *Heath*. Certain higher rainfall temperate areas do not support the expected vegetation as a consequence of limiting soil fertility. The Coonalpyn Downs area is an example. Here low nutrient dune fields are superimposed on the landscape and support only a heath vegetation where the rainfall regime is suitable for woodland. Such 'light land' is the scene of contemporary agricultural expansion.

SOUTH AUSTRALIA VEGETATION MAP



MAP 6

(ii) *Mallee*. Intercalated between the Eremaean and temperate systems proper, there is developed in South Australia extensive mallee vegetation, dominated by eucalypts, the various stems of which all arise from underground lignotubers. The term 'mallee' refers both to eucalypt species exhibiting this growth habit, and to vegetation dominated by such species. Mallee vegetation is associated in its temperate reaches with heath, and in its Eremaean extensions with various vegetation types.

A more detailed description of the vegetation was included on pages 26-37 of *South Australian Year Book* 1967 and should be referred to for a description of the plant species included in the vegetation formations shown in the map on page 23 of this issue.

FAUNA

South Australia is poorly endowed with mammals and birds, this being largely attributable to the dry conditions which prevail over much of the State. Highly developed agriculture in the limited favourable areas and widespread pastoral occupation beyond have seriously depleted the larger fauna by diminishing the native habitats. Introduced predators are established throughout all occupied territory and range beyond it.

Determined efforts are being made, however, to establish a series of national parks and reserves which will preserve samples of the various habitat types and, it is hoped, their indigenous fauna. The Commissioners for National Parks control over 500,000 acres (see Part 6.4), while the Flora and Fauna Board administers the Flinders Chase Reserve on Kangaroo Island which is free from the introduced fox.

The relatively well-watered south-eastern region originally supported a variety of mammals, especially the larger marsupials, but these are reduced to remnant populations by extensive land development and by heavy shooting pressure. The brush-tailed possum (*Trichosurus vulpecula*) is still common, as is the grey kangaroo (*Macropus major*). In the dry interior the red kangaroo (*Macropus rufus*) at times greatly increases in numbers, probably due to changes caused by grazing and extra water supply. Emus and wombats are still to be found in numerous localities.

Bird life is more abundant and many species can be observed close to Adelaide, in the Mount Lofty Ranges, and on Kangaroo Island. Mallee areas with their lower rainfall are moderately rich in bird life although the removal of native flora has led to the disappearance of many species in certain districts. Many mallee birds may be found in areas of greater aridity and these areas also have their true desert forms.

South Australia is rich in reptiles, and numerous interesting species can be observed in the arid regions. As there are few permanent streams or swamps in the State some insects and other invertebrates common elsewhere are scarce or lacking. On the other hand many interesting desert-adapted forms are to be observed.

Apart from the fishes, which include edible species of considerable economic importance, the marine fauna has been little explored.

PART 2

EXPLORATION AND COLONISATION

There are many paradoxes in the story of the discovery and exploration of South Australia, these mainly being explained in terms of the nature of the State. In 1833 Charles Sturt was able to write that 'a spot has been found on the South Coast of New Holland to which the colonist might venture with every prospect of success. All who have ever landed on the eastern shores of Gulf St Vincent agree as to the richness of its soil and the abundance of its pasture.' However, in 1792 the French admiral D'Entrecasteaux was so far from being in agreement with this as to describe the coast of South Australia as 'so uniform that the most fruitful imagination could find nothing to say of it'. It is against a background of such contradictions that the picture of South Australian exploration unfolds: the Dutch reached South Australian waters in 1627, but it was not till after 1801 that British explorers discovered the valuable central southern coastline; Sydney was settled in 1788, but it was not until after 1836 that British settlers came to grips with the South Australian environment. The geographical characteristics of the country had a lot to do with this slow development and were also to hinder subsequent exploration.

EXPLORATION BEFORE COLONISATION

The Dutch made the first recorded discovery of Australia in 1606 on the Gulf of Carpentaria, and Dutch ships were sighting Western Australia from 1616 onwards. It was in 1627 that the first part of the South Australian coast was discovered when the *Gulden Zeepaard* under the command of Francois Thyssen examined the coastline from Cape Leeuwin to the islands of St Francis and St Peter in the far west of South Australia. On board the *Gulden Zeepaard* was Pieter Nuyts, 'Councillor Extraordinary of India', after whom this area was named 'A Landt Van P. Nuyts'.

The Dutch, however, were a trading nation and the South Australian coast impressed them very little, for it presented no evidence of the existence of

trading wealth at all. Indeed, so little interest was displayed in this section of the Australian coastline that it was 165 years before the next recorded sighting of South Australia was made, and this was by a French explorer.

Rear Admiral D'Entrecasteaux, who had been searching all around Australia for the lost French explorer La Perouse, sighted land south of Cape Leeuwin in December 1792 and examined the cliffs of the Australian Bight. He sailed to the head of the Bight, but then after so many miles of barren coast abandoned hope of finding anything other than desolate country, and sailed south for Van Diemen's Land. The early impressions of the South Australian coast were therefore most unfavourable and tended to discourage further investigation.

The British who followed were far more interested in the possibility of colonisation to help ease their population problem at home, and consequently, once the effects of early discouragement had worn off, they began to take an interest in South Australia as a possible site for a new colony. Lieutenant James Grant was the first British explorer to sail along the South Australian coast, sighting the extreme easterly shores of South Australia in about 1801. While in Cape Town he had been informed of the discovery of Bass Strait and was instructed to sail through it in the *Lady Nelson* on his way to Port Jackson. Sailing along the extreme south-east coast he named Cape Banks, Cape Northumberland, Mount Schank and Mount Gambier.

The first notable British contribution to the exploration of the South Australian coast came, however, with the voyages of Matthew Flinders in the *Investigator*. With the support of the President of the Royal Society, Sir Joseph Banks, Flinders sailed from England in July 1801. On his voyage of circumnavigation of the Australian continent he thoroughly explored the coast of South Australia, between January and April 1802. In addition he discovered the Gulfs and Central Highlands, thus solving the question of whether a north-south strait divided the Australian continent in two. More important was the fact that Flinders reported very promising country for settlement. Many places along the coast carry the names given by Flinders; several of these were named after places in his home county of Lincolnshire, e.g. Port Lincoln, Sleaford, the Althorpes and Boston Bay, while others include unusual but attractive names such as Backstairs Passage, The Pages, and Antechamber Bay. Flinders was in fact the first man to explore South Australian waters between Nuyts Archipelago and Encounter Bay. It was at Encounter Bay on 8 April 1802 that he met Captain Nicolas Baudin, the French explorer, heading along the coast from the east in *Le Geographe*.

Baudin, in command of *Le Geographe* and accompanied by *Le Naturaliste*, left Le Havre in October 1800 with instructions to explore several specified regions, including the then unknown portion of the southern coastline of Australia. After being delayed in the East Indies and Van Diemen's Land, Baudin sailed westward and charted the mainland coast from Western Port to Encounter Bay, where he met Flinders. The object of Baudin's expedition was to make scientific discoveries on behalf of Napoleon, but he had wasted considerable time *en route*. Thus most of the South Australian mainland coast was discovered before him by Grant and Flinders, and he was the original explorer of only a small section between Cape Banks and Encounter Bay. Some French names still remain, for example Lacepede Bay, Guichen Bay and Rivoli Bay. After the meeting at Encounter Bay, Baudin sailed further westward and along the northern shore of Kangaroo Island to Murat Bay, before being forced to abandon further exploration and to return to Port Jackson in June 1802. However, after re-equipping his expedition and with the addition of another ship (*Casuarina*), for charting work in shallow

waters, Baudin returned to the South Australian coast by way of King Island in Bass Strait. Leaving King Island on 27 December Baudin in *Le Geographe* and Freycinet in command of *Casuarina* headed direct for Kangaroo Island where they circumnavigated the whole island and charted its coast, being the first to chart its southern and western shores. This was to be the last major contribution made by an official French expedition to exploration of the South Australian coast.

Although these discoveries on the South Australian coast did not lead to any immediate colonisation, there began an increasing series of visits by sealing vessels to Kangaroo Island. A group of American sealers built a schooner on the island in 1804, while wild gangs of sealers and runaway convicts were forming settlements from 1806 onwards. In addition, French exploration in the area had led to a fear on the part of the British authorities that it might result in French colonisation, and, although not greatly valuing the area for itself, the British would have found it an embarrassment to have the French settled on the Australian continent. As a result, in 1804 the British sent a government surveyor by the name of Grimes to Kangaroo Island to report on it as a possible site for colonisation. The Grimes Report was most unfavourable, stating that the soil was poor and that the island lacked fresh water. On the other hand, in 1819 a Captain Sutherland visited the island and wrote an over-optimistic report on its future. It was this report which later led the South Australian Company into establishing their first station there in 1836.

In the period between 1804 and 1836 a number of further discoveries took place at various parts of the South Australian coastline by Captains Dillon (1815-16); Goold (1827-28); Hart (1831-33); and Jones (1833-34), together with the discovery of Lake Alexandrina by a group of sealers in 1828. Reports of this period were marked by contradictions regarding the suitability of South Australia for settlement. However, contradictory as were these accounts reaching England, they managed to convince the founders of South Australia even before 1830 that there was 'a sufficient, indeed a superabundance, of fertile soil for the purpose of the colony'.

The most significant explorations of the period immediately prior to colonisation were those of Captain Charles Sturt, who explored the Murray River from New South Wales down to its mouth; traversed Lake Alexandrina and located the Goolwa channel, reaching the western shore of the Murray mouth on 12 February 1830. Captain Sturt's journey has become something of an epic in Australian history: with a small party of soldiers and convicts he rowed 1,700 miles on the Rivers Murrumbidgee, Darling and Murray. They suffered from desperate weariness, endured a distressing lack of provisions, and were periodically attacked by bands of Aborigines. However, the main object of Sturt's journey was accomplished; the settling of the long-insoluble 'problem of the rivers' of south-eastern Australia. But the real significance to South Australia was more than the mere settling of what was little more than an academic question, for his discoveries opened up 2,000 miles of navigable inland waterway and gave to Gulf St Vincent, which lay so near the mouth of the Murray, an importance and significance previously undreamt of. It was the age of canal building in Europe and of the development of the Mississippi in America, so that navigable water was considered of prime importance. The exuberance felt by everyone interested in South Australia at such a discovery is typified by the Wakefield theorists: 'The whole produce of eastern Australia will eventually be shipped from this place'. In fact the Murray became 'the grand attraction of the scheme'. However, Sturt's own fervour at this stage was somewhat cooler than that of interested persons in England for there was one great disappointment which

marred his discovery—the Murray lacked a sufficiently safe navigable mouth. Sturt found that the Murray flowed into a series of shallow lakes and a sand-blocked mouth. So little did Sturt's contemporaries understand the earth movements and land formations of the area, that their only conclusion was that there must somewhere be another channel emptying the waters of the Murray into the sea. So, the 'problem of the rivers' was replaced by the 'mystery of the Murray mouth'—and official action was to be taken promptly to solve this mystery.

Governor Darling of New South Wales sent Captain Collet Barker to the southern coast to try to solve the problem of the Murray. Barker, landing at Noarlunga on 17 April 1831 ascended Mount Lofty and then returned to his ship, the *Isabella*, and examined Port Adelaide. After landing again at Rapid Bay, he crossed the hills to the Murray, thus proving that the river had no westerly outlet. Barker's expedition came to a tragic end when, under mysterious circumstances, he was apparently murdered at the Murray mouth by the usually peaceable Narrinyeri natives. This was the first of a long series of tragic deaths, mainly due to navigational difficulties, in the area of the Murray mouth which tended to cast a hoodoo on its navigation later on. Barker's party, however, reported fertile country in the region and the existence of a pass from the Murray mouth to Rapid Bay on Gulf St Vincent. While Barker's expedition proved without doubt that there was no really navigable connection between the Murray and the sea, it added to the rapidly growing volume of favourable accounts of the fertility of the region around Gulf St Vincent. Interested people in England were so obsessed with the geographical fact of the great Murray waterway opening up the centre of Australia that they barely registered the unfavourable accounts of its egress to the sea.

Probably the greatest encouragement for the settlement of South Australia came from Charles Sturt himself, who after his return to Sydney in May 1830 wrote *Two Expeditions into the Interior of Southern Australia* (published in 1833), in which he said: 'My eye never fell on a country of more promising aspect, or more favourable position, than that which occupies the country between the lake and the ranges of St Vincent's Gulf, and continuing northward from Mount Barker, stretches away without visible boundary'. This glowing report, together with that of Barker's expedition, was welcomed by those in England seeking a suitable site to establish a colony where the principles of the 'Wakefield Plan' could be applied without restriction. Sturt spared no efforts in converting opinion to the potentialities of South Australia and, as well as his *Two Expeditions*, he wrote a private letter to the Colonial Office on 17 February 1834. Sturt actually marked the present position of the Outer Harbor at Port Adelaide as the proper and natural site for the capital. 'It is in the angle formed by the creek with the coastline that I would recommend the formation of a township, . . . because it appears to me that when the distant interior shall be occupied and communication established with the lake and valley of the Murray, the banks of this creek will be the proper and natural site for the capital . . . The level country to the north would be overspread, the valley of the Murray would be peopled, every available spot would be located, and its numerous ramifications would afford pasture for thousands of cattle'. In his reasons for this opinion he showed more foresight than he was to do later when, in disagreement with Colonel Light, he supported those who wished to move the capital to Encounter Bay.

Colonel William Light, who had been appointed Surveyor-General of the new colony, sailed from England in the *Rapid* on 4 May 1836 with instructions to select a site for the capital of the colony. After a brief visit to Encounter Bay,

during which he unhesitatingly rejected that area as being unsuitable, he landed at Nepean Bay on Kangaroo Island where some South Australian Company ships had already established a settlement. From here Light explored the east coast of Gulf St Vincent. Then, pressed for time by the unexpected arrival of the new settlers, he was able to make only a quick trip to Port Lincoln and a brief inspection of part of the west coast of Gulf St Vincent before, in concurrence with Sturt's earlier opinion, he decided that the most suitable site for Adelaide was on the banks of the small, but centrally situated, River Torrens.

COLONISATION

The colonisation of South Australia was in itself an experiment involving certain entirely new principles and was to represent a turning point in British colonial policy.

The period was conducive to colonisation as in Britain there was widespread unemployment and poverty, the popular remedy for which was emigration. Nevertheless the somewhat revolutionary nature of the plans was to result in seven years of negotiation and considerable modification of early ideas before the colonisation of South Australia was finally approved.

The theoretician was Edward Gibbon Wakefield, and his ideas were contained in a number of writings including the now famous *A letter from Sydney* series, written in 1829 while he was imprisoned in Newgate Gaol. Wakefield's plans involved three broad principles: the sale of land; the use of the receipts for sponsoring emigrants; and the granting of some measure of self-government. Drawing on developments in New South Wales Wakefield argued that the then current system of giving away vast tracts of land to settlers resulted in an imbalance between land and labour. It was therefore desirable to restrict land distribution and increase the labour supply, and this could be done by selling land at a suitably high price to prevent all labourers becoming landowners and by devoting the proceeds to free passage for a carefully selected labour force.

At the same time, following conflicting observations by early explorers, encouraging reports of the South Australian coastline filtering in from traders and seamen gave rise to moves for the practical application of Wakefield's ideas for the founding of a colony in South Australia.

The first attempt to form a colony was made by Robert Gouger who, having met Wakefield in Newgate Gaol in 1829, was so impressed with his ideas as to approach certain interested parties with a view to purchasing a tract of land in South Australia. He was unable, however, to gain sufficient support to interest the Colonial Office in his plans.

In 1830 the National Colonization Society was formed with Gouger as its secretary. The Society served to further disseminate Wakefield's principles, but was not directly associated with plans for a colony in South Australia.

Renewed interest in colonisation followed the first of Captain Sturt's enthusiastic reports of the land of the lower Murray and in 1831 a group of intending settlers, still enthused with the ideas of Wakefield, formed the South Australian Land Company. A committee headed by Colonel Robert Torrens approached the British Government for a charter and then made preparation for the first voyage. The Government was not prepared to grant the necessary territory, and negotiation continued until 1833 when the Company finally conceded that the Government was unlikely to approve any plans involving a chartered colony.

From the same core of enthusiasts who had supported this and earlier ventures there emerged in 1834, the South Australian Association. This group

was prepared to abandon hopes for a chartered colony, conceding the issue of self-government, provided that the enabling legislation accommodated Wakefield's other principles for land sales and migration. The passage of the legislation was by no means smooth; the scheme was new and involved untried principles, and knowledge of the territory was still extremely limited. In addition the association of many persons of liberal outlook with the plans probably reinforced official caution, and these people were to gain few if any concessions.

Doubts on the suitability of the site were to be largely dispelled by the writings and personal representations of Sturt and the confirmatory expedition by Barker, and finally in July 1834 legislation for a colony in South Australia was put before Parliament. This legislation represented a considerable compromise on earlier plans.

The South Australian Colonization Act (4 & 5 William IV. Cap. 95) was assented to on the 15 August 1834; the persistent efforts of Gouger, Torrens, and many others for a settlement in South Australia had finally borne fruit, and at least some of the ideas of Wakefield were to be tried. The territory allotted under the Act embraced 309,850 square miles, with the western boundary the 132nd meridian of east longitude and the other boundaries virtually as they are today. The colony was to be opened to settlement by British subjects, but under no condition were convicts to be admitted, making South Australia the only State to be settled entirely by free persons. Authority was to be divided, with the Colonial Office through the Governor controlling all affairs of government except land sales and immigration, these fields being reserved to a Board of Commissioners. Provision was made for self-government upon the population reaching 50,000. All land alienated by the Crown was to be sold at a price of not less than '12 shillings' (\$1.20) per acre and the whole of the proceeds used in 'conducting the emigration of poor persons from Great Britain and Ireland'.

Although Parliament was prepared to authorise the experiment it was not prepared to finance it; the colony was to be self-supporting. The Commissioners were accordingly authorised to borrow \$400,000 against future general revenue to finance the founding of the colony and the establishment of government, and \$100,000 against the sale of land to start the migration programme. Finally, the Act contained two conditional clauses which were to harass the whole venture and served to delay colonisation another twelve months. The first of these conditions, which were to be satisfied before the Commissioners could exercise their general powers, required that government securities to the value of \$40,000 be lodged as a guarantee for the venture. Secondly land to the value of \$70,000 was to be sold prior to settlement.

A Board of Commissioners with Torrens as chairman was appointed early in 1835. The Board immediately offered land in the new colony at \$2 per acre including rights to a city acre with every 80 acres of rural land. In spite of considerable publicity, unsurveyed land in an unknown colony proved difficult to sell, and with less than half the land sold the price was reduced to the permitted minimum of \$1.20 per acre. Finally, George Fife Angas, a member of the Board, together with two others took up the balance of the land on behalf of the South Australian Company, which was then in the process of being formed.

In December 1835 with sufficient land sold and with the \$40,000 guarantee lodged with the Treasury, the Commissioners were free to begin the business of colonisation. The South Australian Company was formed in January 1836, and in February two ships of the Company sailed for Kangaroo Island to establish a settlement.

May 1836 saw the first official departure of the Surveyor-General, Colonel William Light, whose tasks included choosing a site for the first settlement. Details of Light's early movements are given on pages 28-9. The first Company vessels reached Kangaroo Island in July, and colonists arrived at Adelaide from early November. The first Governor of the colony, Captain John Hindmarsh R.N., arrived at Holdfast Bay on 28 December 1836 and the new colony was officially proclaimed on the same day. By this time some 300 colonists were already in residence. Hindmarsh was to remain in the colony for eighteen months, a period marked by political feuding and very little progress.

The one outstanding feature of the first two years was the work of Light. Expected to carry out impossible tasks with an inadequate staff Light first had to contend with opposition to his choice of a site for Adelaide. Fortunately his views prevailed and the city was surveyed to the plan which has since won so much acclaim, and the land allotted by March 1837. The survey of country land for the preliminary purchasers proceeded very slowly and it was not until May 1838 that the first ballot for country sections was held. At the same time the survey staff were becoming increasingly disgruntled with the unrealistic demands of the Commissioners and in June almost the entire staff resigned. Thoroughly exhausted by his constant struggle with misguided officialdom Light died in October 1839.

While the preliminary survey was in progress the settlers remained in Adelaide where their energies and resources were largely devoted to speculation in town lands and in land orders, and where supplies had to be imported with a corresponding outflow of capital. Superimposed on this situation was the continual arrival of new immigrants who served only to increase the volume of the unemployed.

Much of the inactivity of the colony was due to constant clashes between Hindmarsh and the Resident Commissioner, J. H. Fisher, which finally led to the dismissal of Fisher and the recall of Hindmarsh in July 1838. It was realised that the divided authority as incorporated in the Colonisation Act was impracticable, and the next Governor, Colonel George Gawler, was authorised to represent both the Crown and the Commissioners.

Appalled at the stagnation of the colony, Gawler immediately undertook a liberal spending programme. Surveying was considerably increased with the result that half a million acres had been surveyed by mid-1841. At the same time an extensive public building and works programme provided relief for the unemployed. Generally Gawler created a renewed state of optimism which remained until 1840 when land values were depreciated and sales declined. Immigrants continued to arrive throughout this period.

Most of Gawler's expenditure was met by bills drawn on the Commissioners in London. In 1841 a situation was reached where the Commissioners could no longer honour these bills and Gawler was summarily replaced by Captain George Grey. The Imperial Parliament met the bulk of the debts, and in 1842 the Board of Commissioners was abolished. Thus the small measure of independence which the Board represented disappeared and South Australia became an ordinary Crown Colony.

The term of office of Grey was in contrast to that of Gawler, with Grey imposing rigid economies. Public expenditure was cut and considerable unemployment with its accompanying hardships followed. Speculation ceased and the unemployed gradually left Adelaide to be absorbed on the lands which Gawler had opened up. By this time the flow of immigrants had ceased with the suspension of the assisted migration scheme.

By 1844 the colony was producing wheat in excess of its needs and when Major Robe succeeded Grey as Lieutenant-Governor in 1845 South Australia finally became self-supporting. Moreover prosperity was on the doorstep; copper had been located at Kapunda in 1843 and a major find was made at Burra in 1845. Heavy immigration followed these discoveries and continued until the Victorian gold rush. Copper soon became the principal export, with wool providing a complementary cargo. In addition, the repeal of the Imperial Corn Laws in 1846 and the Navigation Acts in 1849 strengthened the export trade in grain.

The discovery of gold in Victoria in 1851 had a two-fold influence on the development of South Australia. In the first place it drained off a large proportion of the skilled artisans and forced the closing of the copper mines. Secondly it gave great impetus to agriculture when the price of wheat rose sharply—the feeding of the miners became as attractive a proposition as was the actual mining. A temporary shortage of money was relieved when considerable quantities of gold were attracted to the colony by enabling legislation and the provision of armed escorts. Four years later when the miners returned many of the more fortunate purchased land with their winnings.

At the same time political changes were taking place and in 1856 South Australia attained self government. Further details are given in Part 3—Constitution and Government.

EXPLORATION AFTER COLONISATION

Only a minor portion of the area proclaimed as South Australia was to prove economically viable, but extensive exploration with its accompanying hardships was necessary to establish this fact. Post-colonisation exploration was of two forms; the first being the continuous process of discovery as settlers sought grazing and crop lands and sometimes mineral resources, and the second the more deliberate activities of the professional explorers as they sought to cover vast distances through unknown terrain.

The earliest exploratory moves of the colonists were directed towards establishing an overland route between Adelaide and Encounter Bay, and in discovering a north-easterly passage to the River Murray that would by-pass the Mount Lofty Ranges. Contact was first made with Encounter Bay in about July 1837 by Colonel Light and J. H. Fisher, and in December of the same year an expedition by Strangways and Hutchinson played a further important part in making contact with the River Murray by driving a bullock cart across the ranges to Encounter Bay, and then exploring the Murray mouth, the Goolwa channel and the southern part of Lake Alexandrina. The north-easterly route to the Murray was first traversed successfully early in 1838. Penetration of the Mount Lofty Ranges began in 1837, and by the end of the year parties had crossed the ranges and descended to Lake Alexandrina.

From the beginning of 1838, attempts were made to open up stock routes from the eastern States. Joseph Hawdon and Charles Bonney were the first to make an overland cattle drive to Adelaide. Leaving Hawdon's station near Albury on 13 January 1838 with a party of seven men, they took a route which followed the Murray for much of the way, and reached Adelaide in eleven weeks with the cattle in good condition and only four head out of 300 lost *en route*. At the same time, Edward John Eyre was making a similar cattle drive, but after unsuccessfully trying to find a suitable trail south of the Murray, he was forced to make his way back to the Loddon River and then follow the trail taken by Hawdon. In another journey starting in 1838, Eyre became the first to bring sheep overland to Adelaide, driving 1,000 sheep and 600 cattle along the Hawdon

trail. Charles Sturt was another to make an early stock drive to Adelaide, while Bonney in 1839 pioneered an alternative route which followed the south-east coast of the State and crossed the Murray above Lake Alexandrina.

Other parts of the State were also attracting attention. A section of Yorke Peninsula was visited in 1838, and in the following year a number of expeditions were made into the hinterland of Port Lincoln. Thus by 1840 the area within a fifty mile radius of Adelaide had been explored for pastoral, farming and mineral lands. Settlers had also ventured by boat along the Murray, by boat to Port Lincoln and thence inland, and by boat and overland to Yorke Peninsula. Reports by drovers who came down the Murray suggested that the land on the other side of the Murray was of little immediate value. It was soon to be realised, however, that very different conditions prevailed in the lower South East, and by the mid-1840s this area was supporting a considerable sheep population.

Knowledge of the arid interior and of the far west coast was to be obtained from a number of major expeditions, the first such venture being led by Edward John Eyre. In 1839 Eyre journeyed north to Mount Arden, at the head of Spencer Gulf, where he established a base camp. From Mount Arden he made the first sighting of the dry bed of Lake Torrens. Crossing to Port Lincoln, Eyre proceeded up the west coast of the peninsula which was to bear his name, passed through Streaky Bay, and came to within fifty miles of the Western Australian border. The return journey to Mount Arden camp was made across the top of Eyre Peninsula.

The interest of the colonists was now divided between the country to the northward, including Eyre's new-found lake, and the possibility of establishing an overland stock route to Western Australia. Eyre having just returned from the desolate country of the Great Australian Bight showed little enthusiasm for the latter idea, and in June 1840 set out for the north. From Mount Arden he made three attempts to penetrate beyond the lakes, but after following the Flinders Ranges to Mount Hopeless and making a number of observations, he concluded that Lake Torrens was a giant horseshoe-shaped salt lake forming an impassable barrier. This erroneous belief was to persist for eighteen years.

Thwarted in his efforts to go north Eyre decided to attempt the western crossing. Leaving Mount Arden the party separated, one group going direct to Streaky Bay while Eyre went down to Port Lincoln. The party reformed at Streaky Bay and moved to Fowlers Bay, where a camp was established in November 1840. After a number of preliminary explorations around the Bight, Eyre and a small party set out for King George Sound (Albany) in February 1841, having sent the remainder of the party back to Adelaide. Eyre arrived at King George Sound in July after an extremely tortuous crossing which, although an example of human endeavour, contributed little to geographic knowledge.

In 1842 and 1843 the Surveyor-General, Colonel Frome, made two trips to the Lake Torrens region in an attempt to determine the nature of the area. However, after reaching a 'desert-like' Lake Frome (which he believed to be part of Lake Torrens) he turned back, making two short thrusts to the east on the return journey. Frome had seen enough to be able to report that 'there is no country . . . as far as the meridian 141° (and probably much beyond it) available for either agricultural or pastoral purposes'.

Captain Charles Sturt, whose earlier journey down the Murray had helped precipitate the colonisation of South Australia was again to contribute to South Australian exploration. Considerable mystique had developed concerning Central

Australia, including the rumoured presence of an inland sea, and in August 1844 Sturt set out from Adelaide in an effort to unveil this area. Hoping to avoid the supposed horseshoe lake, Sturt followed the Murray and Darling Rivers to Menindee. After passing through Broken Hill and seeing Eyres Mount Hopeless from the other side of the lakes, the party moved to Mount Poole some 200 miles north of Menindee. Here they rested for six months while waiting for rain to fall. In July 1845 Sturt set off in a north-westerly direction crossing Sturt's Stony Desert and the north-east corner of the State. Although temporary relief was provided by Eyre Creek, whose course they followed for some considerable distance, the desert nature of the subsequent terrain forced the party to turn back when very close to their central goal, and only 500 miles from the Gulf of Carpentaria. A second assault on the desert also failed, although Sturt explored along Cooper Creek for almost 100 miles before returning to the base camp and thence to Adelaide in January 1846.

In 1846 John Horrocks led a small party north from his station, Penwortham, through the Flinders Ranges via Horrocks Pass (so named by the party) and on to a camp site at Depot Creek. The party had brought with them the only camel then in the colony, the first time one had been used for exploration work in Australia. From Depot Creek Horrocks made two trips, the first of about twenty miles and the second about sixty miles to Lake Dutton where, jostled by his camel, he accidentally shot himself, thus bringing the expedition to an early end, but not before he had formed the opinion that there was no suitable pastoral land in that direction. Horrocks died of his wounds about three weeks later.

Further to the west a small expedition led by John Darke explored country to the north and east of the Gawler Ranges, and concluded that there was no useful land for settlers in this region. On his way home to Port Lincoln, Darke was mortally wounded by natives near what is now known as Darke Peak. In 1857 Stephen Hack explored the country west of Lake Gairdner and found useful pastoral country at the south-western end of the Gawler Ranges.

At about this time the northern lakes again became a centre of interest. In 1856 there had been considerable rainfall in the area, and when the Deputy Surveyor-General, G. W. Goyder, visited Lake Torrens he found an inland sea surrounded by excellent vegetation. Goyder's glowing report was, however, discounted by a return journey the following year. Indeed the extremely fickle seasons experienced in the north were to lead to many conflicting reports as the explorers and settlers moved northwards. Between 1857 and 1859 several exploratory expeditions visited the region of Lake Torrens and it was during this period that the myth of the horseshoe lake was destroyed. Knowledge of the lakes district was extended by B. H. Babbage, who discovered Lake Eyre in 1858, and Major P. E. Warburton, who located the first stock crossing. A. C. Gregory, coming south from Queensland in search of Leichhardt, passed between the lakes *en route* to Adelaide in 1858.

At the same time parties were searching for pastoral country in the north, with the most extensive search being made by John McDouall Stuart in 1858. Stuart, who had been in Sturt's party in 1844, set out from Mount Arden, passed to the west of Lake Torrens, and circled north of Coober Pedy, returning to Mount Arden via Fowlers Bay. In the meantime the South Australian Government was offering a reward for the first successful north-south crossing of the continent, and after making two exploratory journeys to the north in 1859, Stuart set out in March 1860 to attempt such a crossing.

Stuart had an advantage over Sturt in that the intervening years had revealed the lakes to be passable and he was thus virtually able to begin his expedition at

Chambers Creek at the southern tip of Lake Eyre, and to pass through known country as far as The Neales watercourse. Stuart reached the MacDonnell Ranges in the Northern Territory in April, and later the same month estimated that he had reached the centre of the continent. His attempt to reach the northern coastline was thwarted however, and in June he turned back. In a second attempt in 1861 he followed the same route and this time reached Newcastle Waters before being forced to return. At his third attempt Stuart was successful, reaching the sea on 24 July 1862 and establishing a route which was to be followed by the Overland Telegraph ten years later.

While Stuart was making his second attempt to reach the north, the ill-fated Burke and Wills expedition was crossing the continent further to the east. Their journey took them across the north-east corner of the State along much the same path as that followed by Sturt some seventeen years earlier. In 1861 and 1862 parties led by Alfred Howitt, who left from Melbourne, and John McKinlay from Adelaide were to pass through the same area in search of Burke and Wills. After finding traces of the expedition on Cooper Creek, McKinlay pushed east and then north, to reach the Gulf of Carpentaria.

The construction of the Overland Telegraph between 1870-1872, and the subsequent maintenance of this link between Adelaide and Darwin, naturally led to minor exploration of the adjacent country. At this stage attention turned to the land between the telegraph line and the settlements of Western Australia. Foremost among the explorers of this region, and whose paths brought them within South Australia, were John Forrest and William Ernest Giles. In March 1870 Forrest left Perth for Adelaide, covering much the same path as Eyre had taken thirty years earlier. Forrest crossed South Australian territory again in 1874 when he travelled from Geraldton in Western Australia across the centre of the continent, coming down the Alberga watercourse to Peake telegraph station.

Giles had set out from the Overland Telegraph in 1873 at a point north of Oodnadatta, but was forced to return after covering approximately half the distance to the western seaboard. He tried again in May 1875, this time going south from Beltana to Port Augusta and then to Ooldea on a route which forty years later was to be closely followed by the east-west railway. From Ooldea the party went north for over 100 miles before again striking out to the west. Giles reached Perth in November, and three months later left Geraldton to return to South Australia on a route similar to that taken by Forrest two years earlier, arriving at Peake telegraph station in August 1876.

In 1873 W. C. Gosse, returning from an unsuccessful attempt to reach Perth from Alice Springs, had discovered and named the Musgrave Ranges.

A number of persons other than those mentioned contributed to the exploration of the State, both in the period discussed and subsequently. The inhospitable nature of the country meant that many areas had to await the coming of the aeroplane before an accurate physical description could be recorded. One such expedition was that led by Donald Mackay in 1935 when the western half of the State north of the east-west railway line was aerially surveyed.

PART 3

CONSTITUTION AND GOVERNMENT

3.1 SYSTEM OF GOVERNMENT

South Australia is one of the six Australian States (originally constituted by Acts of the Imperial Parliament) which at Federation in 1901 ceded many of their powers on matters of national importance (*e.g.* international affairs including defence) to the Commonwealth of Australia. From time to time other powers on matters of local importance have been delegated to local governing bodies. As a result the people of South Australia are subject to the laws of a three-tier system of government. In addition statutory powers within specified fields are exercised by certain semi-governmental authorities such as Municipal Tramways Trust, Electricity Trust of South Australia, South Australian Housing Trust, and Metropolitan and Export Abattoirs Board.

Both the Commonwealth and the South Australian Parliaments are bicameral: in each the leader of the Government (the Prime Minister of the Commonwealth and the Premier of South Australia) is seated in the Lower House; in each the Upper House has restricted powers concerning money Bills.

Electorates

For elections for the Commonwealth Upper House (Senate) each State is a single multi-member electorate. South Australia is divided into five multi-member electorates for elections for the State Upper House (Legislative Council) and into eleven and thirty-nine single-member electorates respectively for the Lower House of the Commonwealth (House of Representatives) and the State (House of Assembly).

Although in both the Commonwealth and South Australia it is Parliament alone which has the power to make changes in the number, size, and distribution

of electorates, it is customary to appoint Electoral Commissions to recommend in these matters.

The terms of the Commonwealth Constitution provide for changes in House of Representatives electorates in certain eventualities, but in the South Australian Parliament changes in electorates for either House can be effected only by amendment to the Constitution.

Because of a prescribed relationship between population and the distribution of House of Representatives electorates Commonwealth Electoral Commissions are usually appointed after each Census to consider the effect of changes in the distribution of population and, if necessary, to suggest alterations to the boundaries and distribution amongst the States of Lower House electorates. In South Australia the boundaries of electorates are defined in a schedule to the State Constitution; there is no prescribed relationship between population and electorates, and Electoral Commissions are appointed at irregular intervals.

Party System

Most members of both the Commonwealth and the South Australian Parliaments are elected by the voters from candidates pre-selected and endorsed by one or other of the major parties. Once policy has been determined at a party meeting, members usually observe party solidarity; speaking, voting, and acting in accordance with that policy both in and out of Parliament whether the party be in government or in opposition.

Responsible Cabinet Government

The system known as 'responsible Cabinet government' operates throughout Australia; the Sovereign (or the Governor-General of the Commonwealth or Governor of the State as the representative of the Sovereign) performs acts of government on the advice in Executive Council of Ministers who are accountable for those acts to Parliament and, through Parliament, to the electorate. An essential feature of the system is that the Government will resign or seek a new mandate from the electors if it ceases to command a majority on the floor of the Lower House.

Ministers, Cabinet, and Executive

When a Ministry is to be formed, usually after a general election or when a Government has been defeated in the Lower House, the representative of the Sovereign 'send₃ for' that Member of the Lower House who he thinks will be supported by a majority in the House; when assured of that Member's ability to command the necessary majority the Sovereign's representative commissions that Member, as Prime Minister or Premier, to form a Ministry. Persons to be appointed to the rank of Minister are usually selected either by the Prime Minister or Premier personally or by ballot by Government party members from Members of Parliament belonging to that party or coalition of parties constituting a majority in the Lower House. Irrespective of the method of selecting ministers it is customary for the Prime Minister or Premier to allocate ministerial portfolios, after which the Sovereign's representative formally approves the appointment of each Minister.

A Minister generally holds one or more portfolios and may administer one or more departments. Although each Minister is answerable to Parliament for

the administration of his department it is customary for him to be supported by all other Ministers, provided he acts and speaks within the broad framework of established policy.

The Cabinet is a ministerial body which may comprise all Ministers, as in South Australia, or senior Ministers only, as in the Commonwealth. It does not form part of the legal machinery of government and details of its proceedings are not normally made public.

In each State and in the Commonwealth, there is an Executive Council which is a constitutional body formed to advise the Sovereign's representative in the exercising of executive power. Traditionally attendance is limited to the Sovereign's representative and Ministers of the day, although actual membership may be wider. Meetings of Executive Council are formal and official in character, and a record of proceedings is kept by the Secretary or Clerk: decisions of Cabinet are, where appropriate, given legal form; appointments are made and resignations accepted; proclamations are issued, and regulations are approved.

Committees

At one stage in the consideration of every Bill each House resolves itself into Committee for freer discussion of proposed legislation than would be possible under the rules of formal debate usually applied in Parliament.

In addition to this normal Parliamentary procedure there operates in the Commonwealth and in this State, a Committee system whereby a limited number of Members enquire deeply into particular matters thus enabling a greater volume of work to be handled more effectively. There are Joint Committees, consisting of members of both Houses, and each House has committees to attend to its own functions. Standing Committees (*e.g.* the South Australian Public Works Standing Committee) consider matters of a continuing or recurring nature, and *ad hoc* committees are formed to enquire into and report on specific matters as they arise.

Party representation on Joint and House Committees is usually proportionate to representation in Parliament or the appropriate House respectively.

Administration

The pattern of public administration in South Australia is determined by the division and delegation of statutory authority already mentioned. Various aspects and areas of administration are attended to by Commonwealth and State Government departments, by local government authorities, and by semi-government instrumentalities deriving authority and responsibility from either Commonwealth or State legislation. Within this framework numerous boards and committees exercise administrative and, in some cases, judicial powers.

These various levels of administration are largely interdependent and complementary.⁽¹⁾ Some items of Commonwealth legislation are completely, or almost

(1) 'Examples of administrative interdependence are legion. Indeed, growing interdependence of this kind has accelerated the establishment of organs of Commonwealth and State co-operation in recent years. To the great credit of public administrators in Australia formal and informal co-operation take place at almost every point of common interest.' G. S. Reid 'Commonwealth-State Relations—Administrative Trends and Problems' in *Public Administration* (Aust.), Vol. XXI, No. 2, p. 113.

completely administered by State authorities, often in matters in which (the Commonwealth and the State having concurrent powers) Commonwealth legislation either supplements or supersedes State legislation, *e.g.* the South Australian Supreme Court applies the Commonwealth Matrimonial Causes Act in this State. Performance of State functions by Commonwealth authorities is neither as frequent nor as extensive, but there are instances of the provision of services or facilities, *e.g.* the Commonwealth Electoral Office maintains the House of Assembly electoral roll; State Land Tax may be paid at Post Offices.

Judicature

The degree to which South Australians are subject to the jurisdiction of Commonwealth and State courts respectively varies with the type of action. Most criminal and civil actions are heard, at least originally, in State courts, but many individuals are subject exclusively to Commonwealth jurisdiction in industrial matters.

Generally speaking, the decisions of the lower courts (*e.g.* the South Australian Magistrates and Local Courts) may be the subject of appeal to the State Supreme Courts, and the decisions of these higher courts, acting in either their original or appellate jurisdictions, may be the subject of appeal to the High Court of Australia. An ultimate appeal may, with the consent of the High Court, be made to the Privy Council.

Included in the jurisdiction of the High Court of Australia is the review of legislation to test its constitutional validity.

3.2 COMMONWEALTH GOVERNMENT

Federation

The Commonwealth of Australia was proclaimed as from 1 January 1901 in 'An Act to constitute the Commonwealth of Australia', a statute of the Imperial Parliament, which received Royal assent in July 1900. The draft constitution, which was enacted with only minor amendment, had been prepared at inter-colonial conferences during 1897, 1898, and 1899, and was accepted at referenda during 1899 by South Australia, New South Wales, Victoria, Queensland, and Tasmania, and in 1900 by Western Australia.

Separation of Powers

The Commonwealth Constitution provides, in sections 52, 69, 86, 90, and 115, for certain powers to be vested exclusively in the Commonwealth Government and, in section 51, for certain specified fields of interest to be common to both Commonwealth and State Governments; in cases of conflicting legislation, that of the Commonwealth prevails to the extent of the inconsistency. All other fields of interest remain the exclusive province of the State Governments until amendment is made to the Commonwealth Constitution Act or until the State Parliaments cede particular powers to the Commonwealth Parliament, as was the case in 1921 when the States transferred to the Commonwealth full control over air navigation.

Financial Resources

Since Federation the distribution of financial resources between the Commonwealth and the States has been an almost constant problem. Under the original terms of the Constitution the Commonwealth, for ten years, returned to the States three quarters of the net revenues from the duties of customs and excise; provision also existed for general and particular grants to the States. Significant changes have been made in the distribution of financial resources since 1910. These are reviewed in some detail in Part 12—Public Finance.

COMMONWEALTH LEGISLATURE

The Commonwealth Constitution provides that 'the legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives'. Provision for constitutional amendment includes a requirement that a proposed amendment must be submitted to a referendum.

Franchise

Elections for both Houses of Parliament are conducted by secret ballot. There is universal adult suffrage of British subjects who have resided in Australia for at least six months and who are not of unsound mind, convicted and under sentence for any offence punishable by imprisonment for one year or longer, attainted of treason, or holders of temporary entry permits under the Migration Act.

Compulsory voting was introduced in 1924.

In 1962 special provision was made for the enfranchisement of Australian Aborigines in all States, subject to residence for one month in the subdivision for which enrolment is sought. They are not compelled to enrol as electors, but once enrolled they must vote. Aborigines in South Australia already held this entitlement for Federal elections by virtue of their enfranchisement under similar conditions for State House of Assembly elections.

EXECUTIVE GOVERNMENT

Governor-General

On 22 September 1965 His Excellency the Rt Hon. Lord Casey, G.C.M.G., C.H., D.S.O., M.C., was sworn in as the seventeenth Governor-General of the Commonwealth. His authority as the Queen's representative is derived from Letters Patent, Instructions under the Royal Sign Manual and Signet, and the relevant sections of the Commonwealth Constitution.

Executive Council

Members of the Federal Executive Council are chosen, summoned and sworn by the Governor-General and hold office during his pleasure. All Ministers are members. Councillors usually retain membership for life but it is customary for attendance at meetings to be limited to Ministers of the day.

Ministry

Members of the thirty-sixth Ministry (the first Gorton Ministry) are listed below; the State in which each Minister's electorate is situated is shown in parenthesis.

Gorton Ministry from 26 February 1968*Prime Minister*

The Rt Hon. J. G. Gorton, M.P. (Vic.)

Deputy Prime Minister and Minister for Trade and Industry

The Rt Hon. J. McEwen, M.P. (Vic.)

Treasurer

The Rt Hon. W. McMahon, M.P. (N.S.W.)

Minister for External Affairs

The Rt Hon. P. M. C. Hasluck, M.P. (W.A.)

Minister for Defence

The Hon. A. Fairhall, M.P. (N.S.W.)

Minister for Primary Industry

The Hon. J. D. Anthony, M.P. (N.S.W.)

Postmaster-General and Vice President of the Executive Council

The Hon. A. S. Hulme, M.P. (Qld.)

Minister for National Development

The Hon. D. E. Fairbairn, D.F.C., M.P. (N.S.W.)

Minister for Labour and National Service

The Hon. L. H. E. Bury, M.P. (N.S.W.)

Minister for Shipping and Transport and Assisting the Minister for Trade and Industry

The Hon. I. McC. Sinclair, M.P. (N.S.W.)

Minister for Supply and Leader of the Government in the Senate

Senator The Hon. K. McC. Anderson, (N.S.W.)

Minister for Education and Science

The Hon. J. M. Fraser, M.P. (Vic.)

(The above Ministers constitute the Cabinet)

Minister for Air and Assisting the Treasurer

The Hon. G. Freeth, M.P. (W.A.)

Minister for External Territories

The Hon. C. E. Barnes, M.P. (Qld.)

Minister for Civil Aviation

The Hon. R. W. C. Swartz, M.B.E., E.D., M.P. (Qld.)

Minister for Immigration and Leader of the Government in the House of Representatives

The Hon. B. M. Snedden, Q.C., M.P. (Vic.)

Minister for Health

The Hon. A. J. Forbes, M.C., M.P. (S.A.)

Minister for Repatriation

Senator The Hon. G. C. McKellar (N.S.W.)

Minister for Housing

Senator The Hon. Dame Annabelle J. M. Rankin, D.B.E. (Qld.)

Attorney-General

The Hon. N. H. Bowen, Q.C., M.P. (N.S.W.)

Minister for the Navy

The Hon. C. R. Kelly, M.P. (S.A.)

Minister for the Interior

The Hon. P. J. Nixon, M.P. (Vic.)

Minister for the Army

The Hon. P. R. Lynch, M.P. (Vic.)

Minister for Customs and Excise

Senator The Hon. M. F. Scott (W.A.)

Minister for Social Services and Minister in Charge of Aboriginal Affairs

The Hon. W. C. Wentworth, M.P. (N.S.W.)

Minister for Works, and under the Minister for Trade and Industry, Minister-in-Charge of Tourist Activities

Senator The Hon. R. C. Wright (Tas.)

THE SENATE

The Senate is the Upper House. Originally it was intended that this House should protect the rights and interests of the States, but with the growth of the parliamentary system of party-line voting, its role has become mainly that of a house of review.

Representation

At present the Senate consists of sixty members—ten from each State. The original provision was that each State, voting as a single electorate, should elect six senators but by the Representation Act of 1948, which was effective for the 1949 elections, the number was raised to ten. Except in extraordinary circumstances each Senator is elected for a term of six years, five from each State retiring every three years.

Parliament has the power to vary the number of Senators above a minimum of six for each State. Under the terms of the Constitution any variation in the number of Senators necessitates a change in the number of Members of the House of Representatives.

The party representation in the Senate at 1 July 1968 was:

State	To Retire 30 June 1971				To Retire 30 June 1974			
	L.P.	C.P.	A.L.P.	Others	L.P.	C.P.	A.L.P.	Others
New South Wales	2	1	2	—	1	1	3	—
Victoria	2	—	2	1 (a)	1	1	2	1 (a)
Queensland	1	1	2	1 (a)	1	1	2	1 (a)
South Australia	2	—	3	—	3	—	2	—
Western Australia	2	1	2	—	2	1	2	—
Tasmania	2	—	3	—	2	—	2	1 (b)

L.P.—Liberal Party of Australia (including Liberal and Country League of South Australia and Liberal Country Party of Victoria). C.P.—Country Party. A.L.P.—Australian Labor Party.

(a)—Australian Democratic Labor Party.

(b)—Independent.

The members representing South Australia in the Senate are:

To Retire 30 June 1971:

Davidson, Gordon Sinclair (L.C.L.)
Drury, Arnold Joseph (A.L.P.)
Laught, Keith Alexander (L.C.L.)
Ridley, Clement Frank (A.L.P.)
Toohey, James Philip (A.L.P.)

To Retire 30 June 1974:

Bishop, Reginald (A.L.P.)
Buttfield, Nancy Mrs. (L.C.L.)
Cavanagh, James Luke (A.L.P.)
Laucke, Condor Louis (L.C.L.)
Young, Harold William (L.C.L.)

Elections for the Senate: Voting, South Australia

Date of Election	Electors Enrolled	Votes Recorded		Informal Votes	
		Number	Percentage of Electors Enrolled	Number	Percentage of Votes Recorded
10 December 1949 ..	434,224	420,437	96.82	48,838	11.62
28 April 1951	440,454	427,593	97.08	24,792	5.80
9 May 1953	453,496	437,583	96.49	21,297	4.87
10 December 1955 ..	462,747	444,827	96.13	39,802	8.95
22 December 1958 ..	490,930	473,832	96.52	36,677	7.74
9 December 1961 ...	521,396	501,312	96.15	28,284	5.64
5 December 1964 ...	551,341	528,464	95.85	39,421	7.46
25 November 1967 ...	594,480	568,823	95.68	32,864	5.78

Prior to the election in 1949 the system of preferential voting was used for Senate elections, but for the 1949 and subsequent elections a system of proportional representation has been used.

THE HOUSE OF REPRESENTATIVES

Representation

The Members of the House of Representatives (the Lower House) are elected in single-member electorates. The number of electorates into which a State is divided is determined by the proportion that the population of the State bears to the population of the Commonwealth as a whole. Section 24 of the Commonwealth Constitution provides that the number of members in the House of Representatives shall be as nearly as possible twice the number of Senators and prescribes the formula to be used, 'until the Parliament otherwise provides', for allocating to each State its share of the available seats, but stipulates that no original State shall have less than five members in the House. In addition one member with limited voting rights is elected from the Northern Territory.

In the redistribution of seats on the basis of the Census of 30 June 1954 South Australia gained a seat. Eleven members from South Australia were elected for a term of three years on 26 November 1966.

Preferential voting is used for elections for the House of Representatives.

At present each State is represented in this House as follows:

Party	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
L.P. ...	20	19	8	8	4	2	—	—	61
C.P. ...	9	5	4	—	2	—	1	—	21
A.L.P. ...	17	8	6	3	3	3	—	1	41
Ind. ...	—	1	—	—	—	—	—	—	1

L.P.—Liberal Party of Australia (including Liberal and Country League of South Australia and Liberal Country Party of Victoria). C.P.—Country Party. A.L.P.—Australian Labor Party. Ind.—Independent.

House of Representatives, 1966 Elections

Voting and Party Representation in South Australian Electorates

Electorate	Electors on Roll	Electors Voting	Successful Candidates		
			Name	Party	First Preference Votes
Adelaide	32,920	31,282	Jones, A. T.	L.C.L.	14,724
Angas	45,104	43,626	Giles, G. O'H.	L.C.L.	30,070
Barker	53,374	51,716	Forbes, Hon. A. J.	L.C.L.	33,921
Bonython	88,083	84,324	Nicholls, M. H.	A.L.P.	40,133
Boothby	45,891	43,914	McLeay, J. E.	L.C.L.	28,187
Grey	49,630	47,628	Jessop, D. S.	L.C.L.	22,562
Hindmarsh	55,131	53,112	Cameron, C. R.	A.L.P.	26,096
Kingston	69,071	66,881	Brownbill, Miss K.	L.C.L.	35,041
Port Adelaide	45,593	43,839	Birrell, F. R.	A.L.P.	23,766
Sturt	53,285	51,032	Wilson, I. B. C.	L.C.L.	31,479
Wakefield	47,383	45,987	Kelly, Hon. C. R.	L.C.L.	31,280

Elections for the House of Representatives: Voting, South Australia

Date of Election	Electors Enrolled	Votes Recorded		Informal Votes	
		Number	Percentage of Electors Enrolled	Number	Percentage of Votes Recorded
10 December 1949 .	434,224	420,437	96.82	9,380	2.23
28 April 1951	440,454	(a)384,082	(a)97.09	7,910	2.06
29 May 1954	455,872	(a)357,854	(a)96.77	8,812	2.46
10 December 1955 .	462,747	444,827	96.13	18,050	4.06
22 December 1958 .	490,930	473,832	96.52	15,619	3.30
9 December 1961 ..	521,396	501,312	96.15	15,629	3.12
30 November 1963 .	541,536	523,135	96.60	13,963	2.67
26 November 1966 .	585,465	563,341	96.22	16,220	2.88

(a) Contested electorates only.

REFERENDA

Alteration to the Commonwealth Constitution must be initiated in the Commonwealth Parliament and requires the approval of a majority of electors voting in a majority of the States as well as a majority of all the electors voting in the Commonwealth as a whole.

Of the twenty-six proposals so far submitted to the people of Australia only five have been approved (one in each of 1906, 1910, 1928, 1946 and 1967).

The most recent referendum (1967) proposed two alterations to the Constitution: the first, to sections 7 and 24-27, sought approval to alter the Constitution so that the number of Members of the House of Representatives might

be increased without necessarily increasing the number of Senators; the second, to sections 51 and 127, sought approval to alter the Constitution so as to omit certain words relating to the people of the Aboriginal race in any State and so that Aboriginals would be counted in reckoning the population.

All States and a majority of electors in the Commonwealth voted in favour of the proposal regarding Aboriginals while all States (except New South Wales) and a majority of Commonwealth voters rejected the Parliamentary proposal.

3.3 GOVERNMENT OF SOUTH AUSTRALIA

EARLY CONSTITUTIONAL HISTORY

As has been described in Part 2 the Foundation Act for South Australia provided for the powers of government in the new colony to be shared by a Governor and a Board of Colonisation Commissioners. The Board, which was to be represented in the Colony by a Resident Commissioner, was given power to dispose of Crown Lands in the Colony at a fixed price and to apply the funds derived therefrom to the provision of passages for specially chosen immigrants from the United Kingdom. The other executive and legislative powers in the Colony were entrusted either to the Governor alone or to the Governor associated with a Council of Government, which consisted of certain government officials presided over by the Governor.

Many problems were associated with the division of authority thus created, and during the first few years of its existence the Colony experienced very considerable administrative and financial difficulties. The Colonisation Commissioners, in their Fourth Annual Report to the Secretary of State for the Colonies, complained that 'the boundary line between the power of the local government and that of the commissioners was not distinctly drawn'. The Foundation Act was amended in 1838 and Lt-Col Gawler was appointed both Governor and Resident Commissioner. Although this change brought about unity of action between the two authorities within South Australia it failed to provide a satisfactory solution for the Colony's financial problems. Consequently in 1842 the Imperial Parliament passed legislation repealing the original 1834 Foundation Act and the amending 1838 Act; with the repeal of those Acts the authority ceased under which the Board of South Australian Commissioners and the Resident Commissioner exercised their functions. Thus all power was vested in the Colonial Office, and South Australia was placed on the same footing as other Crown colonies.

The new Act provided authority for Her Majesty to set up within the province one of three alternative Councils of Legislature: a Legislative Council consisting of the Governor and seven other persons; a General Assembly elected by the freeholders and other inhabitants of the colony and a Legislative Council appointed by the Crown; or a single House of Assembly composed of both nominated and elected members. The provision prohibiting the transport of convicts to the colony was re-enacted.

It was the first of these three forms that was brought into operation, and under Royal Instructions issued at Windsor on 29 August 1842 the Legislative Council was constituted to consist of the Governor and three official and four non-official Members (persons not holding offices under the Crown) nominated by the Crown.

From time to time the colonists persisted with petitions for popularly elected representation. By 1849 the colony was in a position to carry the costs of local self-government, and in England in the same year a Committee of the Privy Council styled 'The Committee for the consideration of all matters relating to Trade and Foreign Plantations' presented a long and able report, in which it recommended that more extensive powers of self-government should be granted to the Australian colonies.

An Act 'for the better government of Her Majesty's Australian Colonies', which closely followed the recommendations of this Committee, was passed by the Imperial Parliament in 1850. This Act authorised the existing nominee Council in South Australia to set up a new form of Legislative Council, to consist of such members not exceeding twenty-four as should be thought fit, one-third of whom were to be appointed by Her Majesty and two-thirds of whom were to be elected; the Governor, with the advice and consent of the Legislative Council so to be established, was authorised to make laws for the peace, welfare, and good government of the colony. The Enabling Act further provided that it should be lawful for the Governor and the partly nominated and partly elected Legislative Council, after its constitution in due course, to establish in lieu of such Legislative Council 'a Council and a House of Representatives or other separate Legislative Houses, to consist respectively of such members, to be appointed or elected respectively by such persons and in such manner as by such Act or Acts shall be determined and to vest in such Council and House of Representatives or other separate Legislative Houses the powers and functions of the Legislative Council for which the same may be substituted.' Any Act passed for this purpose had to be reserved for signification of Her Majesty's pleasure thereon and laid before both Houses of the Imperial Parliament for at least thirty days before such consent was given.

The new Legislative Council was elected in July of 1851. In 1853 it exercised the authority given to it by the Imperial Act and passed a Bill for an Act to establish a Parliament in South Australia. Under the terms of this Bill the Parliament of South Australia was to consist of a Legislative Council and a House of Assembly. The Members of the Legislative Council were to be nominated by Her Majesty and were to hold office for life. The House of Assembly was to consist initially of thirty-six Members who were to be elected by adult male inhabitants who held a freehold estate of the clear value of \$40, or were householders occupying a dwellinghouse of the clear annual value of \$10, or were rated by any municipality or district council within the district for which they voted, or had a leasehold estate in possession of the value of \$20 per annum, with not less than one year to run.

As was required by the Imperial Act the Bill was forwarded to London to be laid before both Houses of the Imperial Parliament and to be submitted for Her Majesty's Assent.

A considerable body of the colonists opposed the principle of a nominated Legislative Council and favoured an elective Upper House. During the substantial period that elapsed between the despatch of the Parliament Bill to London and the receipt of the decision of the Imperial Authorities this group prepared a Memorial for transmission to Her Majesty. In this Memorial, which was subsequently signed by 5,000 persons, the protagonists of an elective Upper House expressed their strong opposition to certain of the provisions of the Parliament Bill and associated legislation. As a result the Queen in Council refused assent to the Bill, and it was returned to the South Australian Legislative Council for re-consideration.

RESPONSIBLE GOVERNMENT

On 15 August 1855 the Legislative Council was dissolved, and elections for a new Council were held in September and October of the same year. A new Constitution Bill, making provision for an elective Upper House, was prepared by the Government and submitted in November to the newly elected Legislative Council. The Bill was debated at length and a number of amendments were adopted. The Bill as amended was passed on 2 January 1856 and was referred for Her Majesty's Assent. It was submitted to the Queen in Council on 24 June and received Royal Assent. The 'Act to establish a Constitution for South Australia and to grant a Civil List to Her Majesty' came into force on 24 October 1856.

The principal provisions of the Act were as follows:

1. Parliament was to consist of two Houses—a Legislative Council and a House of Assembly.
2. The Legislative Council was to have eighteen members, to be elected by adult males possessing certain property qualifications.
3. The House of Assembly was to have thirty-six members, to be elected on the basis of manhood suffrage.
4. The life of the House of Assembly was to be three years.
5. All Bills for appropriating revenue or for imposing new taxes were to originate in the House of Assembly.
6. Power to appoint to all public offices was to be vested in the Governor acting with the advice and consent of the Executive Council.
7. Any Bill for an Act to alter the constitution of the Legislative Council or the House of Assembly had to have its second and third readings passed by an absolute majority of the total membership of each House.

The Constitution Act of 1855-1856 which inaugurated the system of Responsible Government in South Australia remains the basis of the State's present day Constitution Act, 1934-1965.

VICE-REGAL REPRESENTATION

From 4 April 1961 to 1 June 1968 Lieutenant-General Sir Edric M. Bastyan, K.C.M.G., K.C.V.O., K.B.E., C.B., was the Queen's representative in South Australia.

At the time of publication a successor had not been appointed and the Government of the State was being administered by the Lieutenant-Governor.

The title of the vice-regal representative has been varied from time to time. The first three holders of the office were styled 'Governor and Commander-in-Chief', the next two, 'Lieutenant-Governor', and the following two, 'Captain-General and Governor-in-Chief'. The title then reverted to its original form until Federation in 1901. Since then, because of the appointment of a 'Governor-General and Commander-in-Chief in and over the Commonwealth', the holder of the State office has been described simply as 'Governor', and this title is used in the following table, which lists occupants of the office since the foundation of South Australia.

Governors of South Australia

Name	From	To
Captain John Hindmarsh, R.N., K.H.	28 December 1836	16 July 1838
Lt-Col George Gawler, K.H.	17 October 1838	15 May 1841
George Grey, Esq.	15 May 1841	25 October 1845
Lt-Col Frederick Holt Robe	25 October 1845	2 August 1848
Sir Henry E. F. Young	2 August 1848	20 December 1854
Sir Richard G. MacDonnell, C.B.	8 June 1855	4 March 1862
Sir Dominick Daly	4 March 1862	19 February 1868
Rt Hon. Sir James Fergusson, BART	16 February 1869	18 April 1873
Sir Anthony Musgrave, K.C.M.G.	9 June 1873	29 January 1877
Lt-Gen. Sir Wm F. D. Jervois, G.C.M.G., C.B.	2 October 1877	9 January 1883
Sir Wm C. F. Robinson, G.C.M.G.	19 February 1883	5 March 1889
Rt Hon. Earl of Kintore, G.C.M.G.	11 April 1889	10 April 1895
Sir Thomas F. Buxton, BART, G.C.M.G.	29 October 1895	29 March 1899
Rt Hon. Hallam, Baron Tennyson, K.C.M.G. .	10 April 1899	17 July 1902
Sir George R. Le Hunte, K.C.M.G.	1 July 1903	18 February 1909
Admiral Sir Day Hort Bosanquet, G.C.V.O., K.C.B.	18 February 1909	22 March 1914
Lt-Col Sir Henry L. Galway, K.C.M.G., D.S.O. .	18 April 1914	30 April 1920
Lt-Col Sir Wm E. G. Archibald Weigall, K.C.M.G.	9 June 1920	30 May 1922
Lt-Gen. Sir George T. M. Bridges, K.C.B., K.C.M.G., D.S.O.	4 December 1922	4 December 1927
Brig.-Gen. the Hon. Sir A. G. A. Hore-Ruthven, V.C., K.C.M.G., C.B., D.S.O.	14 May 1928	26 April 1934
Maj.-Gen. Sir W. J. Dugan, K.C.M.G., C.B., D.S.O.	28 July 1934	23 February 1939
Sir Charles M. Barclay-Harvey, K.C.M.G.	12 August 1939	26 April 1944
Lt-Gen. Sir C. W. M. Norrie, K.C.M.G., C.B., D.S.O., M.C.	19 December 1944	19 June 1952
Air Vice-Marshal Sir Robert A. George, K.C.M.G., K.C.V.O., K.B.E., C.B., M.C.	23 February 1953	7 March 1960
Lt-Gen. Sir Edric M. Bastyan, K.C.M.G., K.C.V.O., K.B.E., C.B.	4 April 1961	1 June 1968

As titular head of the Government of South Australia the Governor exercises powers, duties, and functions, similar to those of a constitutional sovereign. On the one hand he is indirectly responsible to the Imperial Parliament through the Secretary of State for Commonwealth Relations, and on the other hand he usually acts on the advice of his Ministers, who take the responsibility for their advice. Nevertheless, the Governor retains important spheres of discretionary action and is thus enabled to maintain something of a safeguard against malpractice and injustice, particularly in extreme circumstances. To ensure continuity of services, the Governor has power to appropriate up to \$1,200,000 per annum for public service without specific Parliamentary authority.

The Governor's normal term of office is five years, but he can be appointed for one or more subsequent terms. At present he is granted a salary of \$15,000 per annum, an expense allowance based on an amount of \$14,000 per annum and altered in accordance with the Consumer Price Index number for Adelaide as the occasion arises, plus an allowance for payment of the salaries of his staff.

In the absence or prolonged illness of the Governor other persons have been appointed to administer the government of the State. These persons have been variously styled 'Lieutenant-Governor', 'Deputy-Governor', 'Deputy Lieutenant-Governor', and 'Administrator', and several of them have held office more than once. The fifteen persons so appointed have been:

Name	Occupancy of Office		Occasions in Office	Total Period	
	First	Most Recent		Years	Days
George Milner Stephen, Esq.	16/7/1838	17/10/1838	1	—	93
Boyle Travers Finnis, Esq.	20/12/1854	8/6/1855	1	—	170
Lt-Col Francis G. Hamley	20/2/1868	15/2/1869	1	—	362
Maj. James Harwood Rocke	6/4/1870	5/5/1870	1	—	29
Hon. Sir Richard D. Hanson, Chief Justice	7/12/1872	9/6/1873	1	—	184
Rt Hon. Sir Samuel J. Way, BART, Chief Justice	29/1/1877	17/11/1915	65	6	117
Sir William W. Cairns, K.C.M.G.	24/3/1877	17/5/1877	1	—	54
Hon. James P. Boucaut, Judge	26/10/1885	16/9/1897	9	—	263
Hon. William H. Bunday, Judge	30/7/1888	9/8/1888	1	—	10
Hon. Sir G. J. R. Murray, K.C.M.G., LL.M., Chief Justice	25/9/1916	9/2/1942	103	6	47
Hon. Thomas Slaney Poole, M.A., LL.B., Acting Chief Justice	20/3/1925	22/11/1925	2	—	240
Hon. Sir H. Angus Parsons, LL.B., Acting Chief Justice	11/6/1935	19/2/1942	6	—	54
Hon. Sir J. Mellis Napier, K.C.M.G., LL.D., Chief Justice	21/4/1942	10/12/1967	140	7	325
Hon. Sir Herbert Mayo, LL.B., Judge	15/10/1946	9/1/1965	25	—	187
Hon. Sir G. S. Reed, LL.B., Judge....	24/7/1951	4/11/1957	5	—	31

CABINET AND EXECUTIVE GOVERNMENT

In South Australia all Ministers are members of the Cabinet and all Ministers are *ex officio* members of the Executive Council. Although the Governor may, subject to any law enacted by the Legislature, appoint other persons to the Executive Council, membership is in practice limited to Ministers of the day.

The Constitution Act of 1855-1856 provided that every Minister must be a Member of either the Legislative Council or the House of Assembly or become a Member within three months of appointment. However, in 1873 an amendment was made to the Act authorising the Governor to appoint an Attorney-General from outside Parliament; this provision was retained until 1953, and four Attorneys-General were so appointed.

The maximum number of Ministers has been varied from time to time. In 1856 the number was 5; in 1873—6; 1901—4; 1908—6; 1953—8; 1965—9. This is the lowest number of Ministers in any Parliament in the Commonwealth. In 1908 it was specified that no more than four Ministers were to be in the House of Assembly, but in 1953 this limit was increased to 5 and in 1965 to 6.

The Constitution of 1856 provided for salary payments to Ministers but not to other Members. Salary payments to ordinary Members commenced in 1887. The 1967-68 appropriation for salaries and allowances for nine Ministers is \$44,700 paid in addition to salaries and allowances received by Ministers as Members.

Cabinet, as such, has no legal powers. Some Cabinet decisions result in the initiation and subsequent enactment of legislation; other decisions become legally binding through ratification by Executive Council or through powers vested in individual Ministers for the administration and control of their respective departments of government. Not only Government Departments are subject to Ministerial control; statutory authorities also come under some degree of Ministerial or Parliamentary oversight.

Premiers

Since the introduction of responsible government in South Australia the following thirty-six persons have held the office of Premier:

Premiers of South Australia

Name	Dates of Office	Total Period in Office	
		Years	Days
Hon. Boyle T. Finnis	24/10/1856- 21/8/1857	—	301
John Baker	21/8/1857- 1/9/1857	—	11
Sir Robt R. Torrens, G.C.M.G.	1/9/1857- 30/9/1857	—	29
Hon. Sir Richard D. Hanson	30/9/1857- 9/5/1860	2	222
Hon. Thos Reynolds	9/5/1860- 8/10/1861	1	152
Hon. G. M. Waterhouse	8/10/1861- 4/7/1863	1	269
Francis S. Dutton, C.M.G.	4/7/1863- 15/7/1863; 22/3/1865- 20/9/1865	—	193
Hon. Sir Henry Ayers, G.C.M.G.	15/7/1863- 4/8/1864; 20/9/1865-23/10/1865; 3/5/1867- 24/9/1868; 13/10/1868- 3/11/1868;		
Hon. Sir Arthur Blyth, K.C.M.G., C.B.	22/1/1872- 22/7/1873 4/8/1864- 22/3/1865; 10/11/1871- 22/1/1872;	4	35
Hon. John Hart, C.M.G.	22/7/1873- 3/6/1875 23/10/1865- 28/3/1866; 24/9/1868-13/10/1868;	2	254
Hon. Sir James P. Boucaut, K.C.M.G., Q.C.	30/5/1870-10/11/1871 28/3/1866- 3/5/1867; 3/6/1875- 6/6/1876;	1	339
Hon. H. B. Strangways	26/10/1877- 27/9/1878	3	11
Hon. Sir John Colton, K.C.M.G.	3/11/1868- 30/5/1870 6/6/1876-26/10/1877;	1	208
Hon. Sir William Morgan, K.C.M.G.	16/6/1884- 16/6/1885	2	142
Hon. Sir John Bray, K.C.M.G.	27/9/1878- 24/6/1881	2	270
Hon. Sir J. W. Downer, K.C.M.G., Q.C.	24/6/1881- 16/6/1884 16/6/1885- 11/6/1887;	2	358
Hon. Thomas Playford	15/10/1892- 16/6/1893 11/6/1887- 27/6/1889;	2	239
Hon. Sir J. A. Cockburn, K.C.M.G., M.D.	19/8/1890- 21/6/1892	3	323
Hon. Sir F. W. Holder, K.C.M.G.	27/6/1889- 19/8/1890 21/6/1892-15/10/1892;	1	53
Rt Hon. C. C. Kingston, Q.C., D.C.L.	8/12/1899- 15/5/1901	1	274
Hon. V. L. Solomon	16/6/1893- 1/12/1899	6	168
Hon. J. G. Jenkins	1/12/1899- 8/12/1899	—	7
Hon. Sir Richard Butler	15/5/1901- 1/3/1905	3	290
Thomas Price	1/3/1905- 26/7/1905	—	147
Hon. A. H. Peake	26/7/1905- 5/6/1909 5/6/1909- 3/6/1910; 17/2/1912- 3/4/1915;	3	314
Hon. John Verran	14/7/1917- 8/4/1920	6	312
Hon. Crawford Vaughan	3/6/1910- 17/2/1912	1	259
Hon. Sir H. N. Barwell, K.C.M.G.	3/4/1915- 14/7/1917	2	102
Hon. John Gunn	8/4/1920- 16/4/1924	4	8
Hon. Lionel L. Hill	16/4/1924- 28/8/1926 28/8/1926- 8/4/1927;	2	134
Hon. Sir R. L. Butler, K.C.M.G.	17/4/1930- 13/2/1933 8/4/1927- 17/4/1930;	3	160
Hon. R. S. Richards	18/4/1933- 5/11/1938	8	210
Hon. Sir Thomas Playford, G.C.M.G.	13/2/1933- 18/4/1933	—	64
Hon. F. H. Walsh	5/11/1938- 10/3/1965	26	125
Hon. D. A. Dunstan, Q.C.	10/3/1965- 1/6/1967	2	83
Hon. R. S. Hall	1/6/1967- 17/4/1968 17/4/1968-	—	321

Ministry

The Ministry, which was announced on 17 April 1968 following the resignation of the leader of the previous Ministry, the Honourable Donald Allan Dunstan, Q.C., M.P., is the sixty-second Ministry to hold office. The members are:

Premier and Minister of Industrial Development

Hon. Raymond Steele Hall, M.P.

Chief Secretary, Minister of Health and Minister of Mines

Hon. Renfrey Curgiven DeGaris, M.L.C.

Treasurer and Minister of Housing

Hon. Glen Gardner Pearson, M.P.

Minister of Lands, Minister of Repatriation, Minister of Irrigation and Minister of Immigration and Tourism

Hon. David Norman Brookman, M.P.

Minister of Agriculture and Minister of Forests

Hon. Clarence Ross Story, M.L.C.

Minister of Works, Minister of Marine and Minister of Labour and Industry

Hon. John William Hurtle Coumbe, M.P.

Attorney-General, Minister of Social Welfare and Minister of Aboriginal Affairs

Hon. Robin Rhodes Millhouse, M.P.

Minister of Education

Hon. Joyce Steele, M.P.

Minister of Local Government, Minister of Roads and Minister of Transport

Hon. Charles Murray Hill, M.L.C.

PARLIAMENT

Parliament is summoned, prorogued, or dissolved, by proclamation issued by the Governor. The two Houses of Parliament are the Legislative Council (Upper House) and the House of Assembly (Lower House).

Voting System

Members for both Houses are elected by secret ballot; the preferential system of voting is used. In filling the vacancies for each House of Assembly District and the first vacancy in each Legislative Council District the candidate who has received the largest number of first preference votes is elected if this number constitutes an absolute majority (*i.e.* greater than one-half of the total formal votes). If no candidate has received an absolute majority of first preference votes a second count is made in which the second preferences of the candidate who has received the fewest first preference votes are distributed. This distribution of second preferences of the successive candidate with the fewest votes is repeated until one candidate has received an absolute majority of votes.

The second vacancy in each Legislative Council District is filled by re-arranging all the ballot papers according to the first preferences and allotting each ballot paper of the first elected candidate according to the second preferences. If a candidate then has an absolute majority he is elected, otherwise subsequent counts are made eliminating the candidates with the fewest votes until one remaining candidate has received an absolute majority.

Members, Qualifications, and Privileges

Certain requirements must be met before a person qualifies for membership of the South Australian Parliament. The following persons are not eligible for membership of either House: Judges, Ministers of Religion, persons under the age of twenty-one, aliens, members of the Commonwealth Parliament, persons who are not residents of South Australia, holders of contracts for the Public Service, occupants of offices of profit under the Crown, persons of unsound mind, persons attainted of treason, undischarged bankrupts and insolvent persons, and, amongst others, persons under sentence for any offence punishable by imprisonment for at least a year. Other requirements are different for each House; these are mentioned on pages 54 and 55.

Each member is required to take an oath or make an affirmation of allegiance to the Crown before being permitted to sit or vote in Parliament. All Members of the Parliament are entitled to such privileges, immunities, and powers as were held by Members of the House of Commons on 24 October 1856, the date on which the Constitution Act came into force.

Franchise

Details of the franchise for the separate Houses are shown on pages 54 and 55.

South Australia was the first of the Australian States to give voting rights to women, and the existence of this provision in this State contributed to the decision to include full adult franchise in proposals for Federation.

Although a resolution favouring the extension of the franchise to women was passed as early as 1885 by the House of Assembly, a number of Bills designed to give effect to this resolution failed to be passed by the required absolute majority of the total number of Members of each of the two Houses of Parliament. In the year 1894, however, a Bill embodying the principle of female suffrage was approved by the required majority in each House and received Her Majesty's Assent on 21 March 1895. Under the terms of this Act the right to vote at elections for the Legislative Council and the House of Assembly was granted to women subject to the same qualification requirements that applied to men. The franchise thus extended to women was exercised by them for the first time at the general election of 25 April 1896. For the first eighty-five years of responsible government voting for both Houses of Parliament was voluntary. By the Electoral Act Amendment Act of 1942 voting for the House of Assembly was made compulsory.

Functions of Parliament

The function of Parliament is to legislate for the peace, order, and good government, of the State. Principal among the tasks of Parliament is the raising of revenue and the appropriation of funds for the development and maintenance of the State through its public services.

Legislation may be initiated by any Member in either House except that money bills must be initiated by Ministers of the Crown in the House of Assembly; the Legislative Council may suggest amendments to money bills although it may not effect such amendments itself.

Most bills are initiated by the Government as a result of the deliberations of Cabinet. The Opposition and Independent Members usually confine their activities to examination, criticism, and amendment, of Government measures.

Legislation other than to amend the Constitution of either House may be passed by a simple majority of the votes of the Members present.

Constitutional Amendment

Alteration to the Constitution Act is in the hands of Parliament itself. An alteration to the Constitution of either House requires at the second and third readings of the bill acceptance by a majority of all the Members (not only those present or voting) of each House voting separately.

Deadlocks

A deadlock results from the refusal by the Upper House to pass the same (or substantially the same) Bill during two consecutive Parliaments, provided that a general election for the Lower House has been held between the refusals and that on the second occasion an absolute majority of all the Members of the Lower House voted in favour of the Bill at its second and third readings. In the event of a deadlock between the Houses, provision is made for the dissolution of both Houses or alternatively for the election of two additional Members for each Legislative Council district.

Life of Parliament

The term of office of each Parliament since the establishment of responsible government has been three years except in the case of the twenty-eighth Parliament. By legislation introduced in 1933 the life of the twenty-eighth Parliament was extended to five years. In 1937 the Constitution Act was amended to provide for each subsequent Parliament to have a life of five years. However, the twenty-ninth Parliament repealed this provision and re-introduced three-year Parliaments.

Number of Members and Electorates

Alterations made to the number of Members and number of electorates for each of the two Houses are shown in the following table:

Date	Legislative Council		House of Assembly	
	Members	Electorates	Members	Electorates
1856.....	18	1	36	17
1863.....	18	1	36	18
1875.....	18	1	46	22
1882.....	24	4	46	22
1884(a).....	24	4	52	26
1890.....	24	4	54	27
1902.....	18	4	42	13
1912(b).....	18	4	40	12
1915.....	20	5	46	19
1938.....	20	5	39	39

(a) Separate representation for Northern Territory.

(b) Cession of Northern Territory to Commonwealth control.

The present allocation of twenty-six country and thirteen metropolitan electorates for the House of Assembly was introduced in 1938. In 1956 alterations were made to the boundaries of electorates, but the number was unaltered. Under the Electoral Districts (Redivision) Act, 1962, a Commission was appointed to investigate and report on the possibility of dividing the State into twenty rural and from twenty to twenty-two urban electorates. Subsequently the Bill to incorporate the recommendations of the Commission failed to gain an absolute majority in the House of Assembly.

Salaries and Allowances

The annual salary from 1 July 1966 is \$6,500 per member with allowances of \$1,200, \$1,600, or \$1,900 depending on the distance of the Member's electorate from the City of Adelaide. The following additional payments are also made:

Premier and Treasurer—\$5,500, plus Expense Allowance of \$1,500.

Chief Secretary—\$4,100, plus Expense Allowance of \$1,200.

Other Ministers—\$3,500, plus Expense Allowance of \$1,000.

President of Legislative Council and Speaker of House of Assembly—each \$2,100, plus Expense Allowance of \$200.

Chairman of Committees, House of Assembly—\$1,050.

Leader of the Opposition—\$2,500, plus Expense Allowance of \$600.

Deputy Leader of the Opposition—\$800.

Government Whip—\$600.

Opposition Whip—\$600.

Leader of the Opposition in the Legislative Council—\$600, plus Expense Allowance of \$300.

Superannuation

All members are required to contribute to a superannuation fund. This fund was established under the Parliamentary Superannuation Act, 1948-1965 which provides for the payment of superannuation pensions to persons or widows or widowers of persons who have served as members of the State Parliament. No member can qualify for a pension until he has served a minimum of eight years either in one term or as an aggregate of terms. The standard contribution to this fund is \$456 per annum, although some current members contribute, under provisions of previous legislation, either \$228 or \$342. According to the annual contribution and the length of service the pension payable varies between \$1,456 and \$4,264 per annum.

At 30 June 1967 there were fifty-nine contributors to the fund; and thirteen ex-members and seventeen widows were in receipt of pensions.

LEGISLATIVE COUNCIL

Members and Electorates

Each Member of the Legislative Council, in addition to fulfilling the general requirements mentioned on page 52, must have attained the age of thirty years, be a British subject or 'legal denizen of the State', and have resided in the State for at least three years. For the purpose of electing Members to the Council the State is divided into five electorates each having four Members. Each electorate elects two Members every three years, and each Member occupies his seat for six years. A casual vacancy may occur when a Member dies, or resigns, or ceases to satisfy any qualification for membership. Such a casual vacancy is filled, at a by-election in the particular electorate, for the unexpired portion of the previous Member's term.

It is not unusual for many of the candidates for this House to be returned unopposed at an election.

The first woman Member was elected to this House in 1959.

Franchise

The franchise for the Legislative Council has been varied from time to time since the commencement of responsible government. Under the Constitution Act

of 1855-1856 the franchise for the Legislative Council was extended to adult males possessing one of the following property qualifications:

- (a) A freehold of the value of \$100,
- (b) A leasehold of the annual value of \$40, and having three years to run or including a right of pre-emption.
- (c) Occupation of a dwelling house of the annual value of \$50.

The Constitution Act Amendment Act, 1894, which extended the franchise of the Lower House to women, also gave them the right to vote at elections for the Legislative Council, subject to the existing property qualifications applicable to men.

By an Act of 1907 the franchise for the Legislative Council was extended to a number of additional categories of persons. These included occupiers of dwelling houses of an annual rental value of at least \$34, certain holders of Crown leases who were not enfranchised by previous legislation, certain ministers of religion, head teachers of schools, postmasters, railway station masters, and police officers. These persons lost their special franchise when the qualifications of voters for the Legislative Council were again revised in 1913.

The 1913 legislation, which in its essentials remains in force today, provided that the right to vote for the Legislative Council should be granted to 'any person who is an inhabitant occupier as owner or tenant of any dwelling house; provided that no person shall be entitled to vote by reason of being a joint occupier of any dwelling house'. The franchise is also extended to certain past and present defence personnel who would not otherwise qualify.

President and Chairman of Committees

At the first meeting of the Council in each Parliament the Members choose one from among their number to fill the position of President and Chairman of Committees. The person so elected is then entitled to a casting vote only.

HOUSE OF ASSEMBLY

Seat of Government

The House of Assembly can be regarded as the more important Chamber in that the Government of the day holds its position as such only so long as it controls a majority in this House. When it no longer controls such a majority in vital issues, particularly 'money bills', the Government must resign or go to the polls. Once defeated in the Lower House on a 'money bill' the Government is unable to finance the administration of the State.

Franchise and Membership

Members of this House are elected for a maximum period of three years, for single-member districts, on a system of universal adult suffrage of British subjects resident in the State for at least six months. Certain present and past defence personnel are enfranchised by a special provision if they would not otherwise be entitled to vote. Subject to the exclusions mentioned on page 52 election to this House is open to those eligible to vote in an election for the House. The seat of a Member becomes vacant in cases similar to those stated for Legislative Councillors and may be filled at a by-election.

The first woman Member was elected to this House in 1959.

Officers and their Functions

A Speaker presides over the House, and his election is the first business when a Parliament first meets. He presides over debate, maintains order, represents the House officially, communicates its wishes and resolutions, defends its privileges when necessary, and applies its procedure. The Speaker may exercise a

casting vote only. There is also a Chairman of Committees elected by the House at the beginning of each Parliament; he presides over the deliberations of the House in Committee and acts as Deputy Speaker when required.

ELECTIONS AND PARTY REPRESENTATION

It appears from the following table that compulsory voting for the House of Assembly introduced by the Electoral Act Amendment Act of 1942 caused a considerable increase in voting for the Legislative Council.

Voting details of the most recent election are of particular interest in that all House of Assembly districts were contested at the same election for the first time since 1918 while for the Legislative Council it was the first time since 1947. Furthermore it was also the first time since 1918 that all Legislative Council and House of Assembly districts have been contested at the same election.

Voting: South Australian Parliament, 1933 to 1968

Date	Legislative Council				House of Assembly			
	Electors on Roll	Contested Electorates			Electors on Roll	Contested Electorates		
		Electors Enrolled	Electors Voting	Per Cent		Electors Enrolled	Electors Voting	Per Cent
8 April 1933	133,152	39,415	25,309	64.21	338,576	307,285	182,693	59.45
19 March 1938 ...	129,135	129,135	91,165	70.60	364,884	352,423	223,136	63.31
29 March 1941 ...	133,358	115,952	70,660	60.94	378,265	339,263	171,978	50.69
29 April 1944 (a) ...	142,314	98,482	81,791	83.05	401,747	289,032	255,883	88.53
8 March 1947	155,847	155,847	124,826	80.10	418,308	306,059	285,765	93.37
4 March 1950	161,917	68,347	52,954	77.48	437,832	311,658	290,306	93.15
7 March 1953	168,758	97,968	79,373	81.02	449,630	354,273	336,592	95.01
3 March 1956	174,241	22,963	16,002	69.69	468,303	299,048	280,811	93.90
7 March 1959	187,248	86,278	70,007	81.14	497,456	426,340	400,531	93.95
3 March 1962	201,517	118,218	98,786	83.56	531,228	444,197	417,462	93.98
6 March 1965	213,377	186,899	149,910	80.21	562,824	542,436	513,064	94.59
2 March 1968	275,701	275,701	261,378	94.80	609,626	609,626	575,904	94.47

(a) First election under compulsory voting for the House of Assembly.

The following table shows the Party representation in both Houses of the South Australian Parliament resulting from each general election from 1933.

Party Representation, South Australian Parliament, 1933 to 1968

Date	Legislative Council				House of Assembly			
	L.C.L.	A.L.P.	Inde- pendent	Other	L.C.L.	A.L.P.	Inde- pendent	Other
8 April 1933	16	2	1	1(a)	29	6	4	{ 4(a) 3(b) 2(c)
19 March 1938 ..	15	2	1	2(c)	15	9	13	2(c)
29 March 1941 ...	14	4	1	1(c)	21	11	5	2(c)
29 April 1944	15	5	—	—	20	16	3	—
8 March 1947	16	4	—	—	23	13	3	—
4 March 1950	16	4	—	—	23	12	4	—
7 March 1953	16	4	—	—	21	14	4	—
3 March 1956	16	4	—	—	21	15	3	—
7 March 1959	16	4	—	—	20	17	2	—
3 March 1962	16	4	—	—	18	19	2	—
6 March 1965	16	4	—	—	17	21	1	—
2 March 1968	16	4	—	—	19	19	1	—

NOTE : L.C.L.—Liberal and Country League ; A.L.P.—Australian Labor Party.

(a) Parliamentary Labor. (b) Lang Labor. (c) Independent Labor.

Of the thirty-nine electorates for the House of Assembly thirteen are metropolitan and twenty-six are country. The table below shows the electoral returns for the general election held on 2 March 1968.

House of Assembly: Party Representation, 1968

Electorate	Electors on Roll	Electors Voting	Successful Candidate		
			Name	Party	First Preference Votes
Metropolitan:					
Adelaide	15,061	14,109	Lawn, S. J.	A.L.P.	8,315
Burnside	37,430	35,648	Steele, Hon. Mrs. J.	L.C.L.	20,609
Edwardstown	34,121	32,047	Virgo, G. T.	A.L.P.	18,055
Enfield	45,510	43,096	Jennings, J. J.	A.L.P.	28,246
Glenelg	37,422	35,615	Hudson, H. R.	A.L.P.	18,711
Hindmarsh	22,521	21,411	Hutchens, Hon. C. D.	A.L.P.	14,874
Mitcham	27,057	25,164	Millhouse, Hon. R. R.	L.C.L.	16,056
Norwood	19,262	18,089	Dunstan, Hon. D. A.	A.L.P.	9,981
Port Adelaide	22,565	21,039	Ryan, J. R.	A.L.P.	13,911
Semaphore	24,306	23,112	Hurst, R. E.	A.L.P.	15,613
Torrens	19,488	18,242	Coumbe, Hon. J. W. H.	L.C.L.	9,126
Unley	19,163	17,811	Langley, G. R. A.	A.L.P.	8,820
West Torrens	39,364	37,187	Broomhill, G. R.	A.L.P.	20,283
Country:					
Albert	8,154	7,783	Nankivell, W. F.	L.C.L.	5,870
Alexandra	13,870	13,306	Brookman, Hon. D. N.	L.C.L.	6,349
Angas	6,794	6,531	Teusner, Hon. B. H.	L.C.L.	4,351
Barossa	17,975	17,085	Byrne, Mrs. M. V.	A.L.P.	8,792
Burra	5,777	5,570	Allen, E. C.	L.C.L.	3,131
Chaffey	7,880	7,358	Arnold, P. B.	L.C.L.	3,392
Eyre	7,655	7,345	Edwards, E. C. A.	L.C.L.	3,292
Flinders	7,717	7,385	Pearson, Hon. G. G.	L.C.L.	4,285
Frome	4,988	4,634	Casey, T. M.	A.L.P.	2,672
Gawler	35,122	32,568	Clark, J. S.	A.L.P.	20,573
Gouger	12,523	11,841	Hall, Hon. R. S.	L.C.L.	6,557
Gumeracha	7,745	7,100	Giles, B. L.	L.C.L.	4,740
Light	5,941	5,721	Freebairn, J. S.	L.C.L.	3,873
Millicent	7,649	7,342	Corcoran, J. D.	A.L.P.	3,635
Mount Gambier ...	10,142	9,691	Burdon, A. R.	A.L.P.	5,567
Murray	8,727	8,417	Wardle, I. A.	L.C.L.	4,039
Onkaparinga	7,857	7,488	Evans, S. G.	L.C.L.	4,228
Port Pirie	6,665	6,367	McKee, D. H.	A.L.P.	4,301
Ridley	7,368	7,115	Stott, Hon. T. C.	Ind.	2,824
Rocky River	5,548	5,346	Venning, H. M.	L.C.L.	3,671
Stirling	7,514	7,235	McAnaney, W. P.	L.C.L.	5,124
Stuart	8,848	8,295	Riches, L. G.	A.L.P.	6,002
Victoria	7,382	7,057	Rodda, W. A.	L.C.L.	4,439
Wallaroo	5,834	5,652	Hughes, L. C.	A.L.P.	2,899
Whyalla	14,125	12,789	Loveday, Hon. R. R.	A.L.P.	9,268
Yorke Peninsula ...	6,556	6,313	Ferguson, J. R.	L.C.L.	4,651

NOTE : A.L.P.—Australian Labor Party ; L.C.L.—Liberal and Country League ; Ind.—Independent.

Speaker: The Hon. T. C. Stott.

Chairman of Committees: The Hon. B. H. Teusner.

Leader of the Opposition: The Hon. D. A. Dunstan, Q.C.

Deputy Leader of the Opposition: Corcoran, J. D.

Government Whip: Rodda, W. A.

Opposition Whip: Broomhill, G. R.

Clerk of the House of Assembly: Combe, G. D.

The members of the Legislative Council and the districts they represent are:

To Retire in 1971

Banfield, Hon. D. H. L.	(A.L.P.)	Central No. 1
Bevan, Hon. S. C.	(A.L.P.)	Central No. 1
Cooper, Hon. Mrs. J. M.	(L.C.L.)	Central No. 2
Potter, Hon. F. J.	(L.C.L.)	Central No. 2
DeGaris, Hon. R. C.	(L.C.L.)	Southern
Kemp, Hon. H. K.	(L.C.L.)	Southern
Hart, Hon. L. R.	(L.C.L.)	Midland
Rowe, Hon. C. D.	(L.C.L.)	Midland
Geddes, Hon. R. A.	(L.C.L.)	Northern
Whyte, Hon. A. M.	(L.C.L.)	Northern

To Retire in 1974

Kneebone, Hon. A. F.	(A.L.P.)	Central No. 1
Shard, Hon. A. J.	(A.L.P.)	Central No. 1
Hill, Hon. C. M.	(L.C.L.)	Central No. 2
Rymill, Hon. Sir Arthur	(L.C.L.)	Central No. 2
Jude, Hon. Sir Norman L. . . .	(L.C.L.)	Southern
Springett, Hon. V. G.	(L.C.L.)	Southern
Dawkins, Hon. M. B.	(L.C.L.)	Midland
Story, Hon. C. R.	(L.C.L.)	Midland
Gilfillan, Hon. G. J.	(L.C.L.)	Northern
McEwin, Hon. Sir A. Lyell . . .	(L.C.L.)	Northern

President and Chairman of Committees: Hon. Sir Lyell McEwin

Leader of the Opposition: Hon. A. J. Shard.

Clerk of the Legislative Council: Ball, I. J.

REFERENDA

Since the inception of responsible government in South Australia in 1856 six referenda have been held—the first in 1896 and subsequent ones in 1898, 1899, 1911, 1915 and 1965—and nine proposals have been submitted.

Three proposals related to education (1896) of which only one was approved; three were constitutional (1898 and 1899)—all approved; one related to Parliamentary salaries (1911)—not approved; one related to bar-room closing hours (1915)—favoured 6 p.m. closing; and one related to the establishment of a lottery (1965)—approved.

The last referendum, held in 1965, approved the question 'Are you in favour of the promotion and conduct of lotteries by the Government of the State?' with 344,886 electors voting 'Yes' and 142,196 electors voting 'No'.

ADMINISTRATION

The South Australian Public Service consists of fifty-three departments, many of which are very small. The range of functions of each was shown in pages 59 to 66 of the *South Australian Year Book* 1966. The departments have been grouped in the following list to indicate the Ministerial control.

PREMIER AND MINISTER OF INDUSTRIAL DEVELOPMENT

Hon. Raymond Steele Hall, M.P.

Premier's Department

CHIEF SECRETARY, MINISTER OF HEALTH AND MINISTER OF MINES

Hon. Renfrey Curgiven DeGaris, M.L.C.

Chief Secretary's Department	Prisons Department
Government Reporting Department	Hospitals Department
Audit Department	Public Service Commissioner's Department
Government Printing Department	ment
Police Department	Department of Public Health
Department of the Public Actuary	Department of Mines

TREASURER AND MINISTER OF HOUSING

Hon. Glen Gardner Pearson, M.P.

Treasury Department	Agent-General in England Department
Superannuation Department	Valuation Department
State Taxes Department	

MINISTER OF LANDS, MINISTER OF REPATRIATION, MINISTER OF IRRIGATION AND MINISTER OF IMMIGRATION AND TOURISM

Hon. David Norman Brookman, M.P.

Lands Department	Botanic Gardens Department
Immigration, Publicity and Tourist Bureau Department	

MINISTER OF AGRICULTURE AND MINISTER OF FORESTS

Hon. Clarence Ross Story, M.L.C.

Minister of Agriculture Department	Produce Department
Agriculture Department	Fisheries and Fauna Conservation Department
Agricultural College Department	Department
Chemistry Department	Woods and Forests Department

MINISTER OF WORKS, MINISTER OF MARINE AND MINISTER OF LABOUR AND INDUSTRY

Hon. John William Hurtle Coumbe, M.P.

Public Works Department	Public Stores Department
Engineering and Water Supply Department	Department of Marine and Harbors
Public Buildings Department	Department of Labour and Industry

CONSTITUTION AND GOVERNMENT**ATTORNEY-GENERAL, MINISTER OF SOCIAL WELFARE AND
MINISTER OF ABORIGINAL AFFAIRS**

Hon. Robin Rhodes Millhouse, M.P.

Attorney-General's Department	Supreme Court Department
Parliamentary Draftsmen's Department	Adelaide Local Courts Department
	Adelaide Magistrates Court Department
Crown Solicitors Department	
Public Trustee Department	Registrar-General of Deeds Department
Department of Social Welfare	
Department of Aboriginal Affairs	Electoral Department

MINISTER OF EDUCATION

Hon. Joyce Steele, M.P.

Department of the Minister of Education	Libraries Department
	Museum Department
Education Department	Art Gallery Department

**MINISTER OF LOCAL GOVERNMENT, MINISTER OF ROADS AND
MINISTER OF TRANSPORT**

Hon. Charles Murray Hill, M.L.C.

Department of the Minister of Local Government and Roads	Highways and Local Government Department
Department of the Minister of Transport	Motor Vehicles Department

LEGISLATION

During 1967, seventy-eight Public Acts were passed by the State Parliament: twenty-four new Acts and fifty-four amendments of existing Acts.

Details of some of the more important legislation passed during this period are given below.

Aboriginal Affairs Act Amendment Act, 1967 (No. 11) amended the Aboriginal Affairs Act, 1962 to provide additional powers to make regulations for the establishment and constitution of aboriginal reserve councils and the definition of their rights, powers and functions.

Adoption of Children Act, 1967 (No. 12) repealed the Adoption of Children Act, 1925-1965 and provided for the recognition in South Australia of adoption orders made in other States and overseas and lays down the general effect of an adoption order.

Births, Deaths and Marriages Registration Act, 1967 (No. 16) enacted legislation to consolidate and amend the law relating to the registration of births, deaths and marriages and to the legitimization of children.

Builders Licensing Act, 1967. An Act to provide for the licensing of certain persons in the building trade.

Electrical Articles and Materials Act Amendment Act, 1967 (No. 34), amended the Electrical Articles and Materials Act, 1940 and included provision for the prohibition of the sale, hire or use of dangerous electrical articles or materials.

- Fisheries Act Amendment Act, 1967 (No. 52) amended the Fisheries Act, 1917-1962 with respect to crayfishing by imposing boat limits and pot limits for an experimental period.
- Harbors Act Amendment Act, 1967 (No. 53) amended the Harbors Act, 1936-1966 and included the repeal of Section 168 of the Principal Act requiring surveyors of hulls and cargoes of vessels to be licensed.
- Hospitals Act Amendment Act, 1967 (No. 54) amended the Hospitals Act, 1934-1966 to include provision for the payment of the cost of hospital treatment of persons injured as a result of the use of motor vehicles.
- Industrial Code Act, 1967 (No. 74). An Act to consolidate and amend the law relating to industrial conciliation and arbitration, and the regulation, control, and inspection of factories, shops, offices and warehouses, to repeal certain Acts and to amend the Bakehouses Registration Act.
- Irrigation Act Amendment Act, 1967 (No. 55) made several amendments to the Irrigation Act 1930-1946 including a redefinition of 'ratable land'.
- Libraries and Institutes Act Amendment Act, 1967 (No. 13) amended the Libraries and Institutes Act, 1939-1964 by changing the name of the Public Library of South Australia to State Library of South Australia and the title of office of Principal Librarian to State Librarian.
- Licensing Act, 1967 (No. 41). An Act to consolidate and amend the laws relating to the supply of intoxicating liquors.
- Local Government Act Amendment Act, 1967 (No. 36) amended the Local Government Act, 1934-1966 and included provision for any proclaimed district council to apply for city status.
- Long Service Leave Act, 1967 (No. 65) repealed the Long Service Act 1957 and made more effective provision for the granting of long service leave to employees.
- Lottery and Gaming Act Amendment Act, 1967 (No. 56) amended the Lottery and Gaming Act, 1936-1966 to permit the Totalisator Agency Board to co-operate with and assist other State authorities in the provision of off-course betting facilities.
- Mental Health Act Amendment Act, 1967 (No. 57) amended the Mental Health Act, 1935-1966 to ensure that establishments referred to as 'psychiatric rehabilitation hostels' conform to an acceptable standard and properly provide for the care of their inmates.
- Natural Gas Pipeline Authority Act, 1967 (No. 3) authorised the establishment of a natural gas pipeline authority to be known as the Natural Gas Pipelines Authority of South Australia and conferred on the authority power to construct and operate pipelines for the conveyance of natural gas and derivatives thereof.
- Packages Act, 1967 (No. 67). An Act relating to the packing of certain articles for sale or the selling of those articles.
- Petroleum (Submerged Lands) Act, 1967 (No. 78). An Act relating to the exploration for, and the exploitation of the petroleum resources, and certain other resources of certain submerged lands adjacent to the coasts of the State.

Pharmacy Act Amendment Act, 1967 (No. 73) amended the Pharmacy Act, 1935-1965 and made provision so that the holding of a new proposed diploma awarded by the Institute of Technology will be acceptable for registration under the Pharmacy Act.

Places of Public Entertainment Act Amendment Act, 1967 (No. 68) amended the Places of Public Entertainment Act, 1913-1965 and made provision for the liberalising of the law relating to entertainment on Sundays.

Planning and Development Act, 1966-1967 (No. 20) repealed the Town Planning Act, 1929-1963 and enacted legislation to provide for effective town planning throughout the State.

Police Offences Act Amendment Bill, 1967 (No. 58) amended the Police Offences Act, 1953-1961 to prohibit the manufacture, sale, distribution, possession or use of certain drugs without lawful use.

Primary Producers Emergency Assistance Act, 1967 (No. 42). An Act to provide assistance to primary producers in necessitous circumstances as a result of drought, fire, flood, frost, animal or plant disease, insect pest or other natural calamity.

Real Property Act Amendment (Strata Titles) Act, 1967 (No. 37) amended the Real Property Act, 1886-1963 to provide for the issue of Strata titles and allow for easier purchase of home units.

Road Traffic Act Amendment Act, 1967 (No. 43) amended the Road Traffic Act, 1961-1966 and created a new statutory offence for the driving of a motor vehicle while the percentage of alcohol in the blood was .08 per cent expressed in grammes/100 mill and for the provision of the use of breathalysers.

Succession Duties Act Amendment Act, 1967 (No. 31) amended the Succession Duties Act, 1929-1963 and included provision of special rebates and exemptions for estates of persons dying as a result of military service and made provision for rates of duty payable by parents on estates of illegitimate children.

Complete details of Acts passed are contained in the volumes of *Acts of the Parliament of South Australia*.

OVERSEAS AND INTERSTATE REPRESENTATION

South Australia maintains an Agent-General's Office at South Australia House, 50 The Strand, London, W.C.2. As official representative of the State it is the function of the Agent-General to work in close co-operation with the High Commissioner for Australia, to keep the Government informed of political and economic developments overseas, to promote trade with the United Kingdom and other countries, and to act as agent for the State in the United Kingdom. Mr. K. L. Milne is the present Agent-General.

The South Australian Tourist Bureau maintains offices at 390 George Street, Sydney, N.S.W., and at 8 Royal Arcade, Melbourne, Victoria, to foster and facilitate tourist travel to South Australia.

CONSULAR REPRESENTATIVES

There are twenty-one countries represented in South Australia by consuls, vice-consuls, consular agents, consul-generals or deputy high commissioners.

Austria: John A. Nelson, Consul^(a)
Belgium: Robert E. Porter, Consul
Denmark: Trevor R. Taylor, Consul
Dominican Republic: P. H. D. Lathlean, Consul
Finland: Robert N. Irwin, Consul
France: F. C. Buttfield, Consular Agent
Germany: Vacant
Greece: Vassile P. Apostol, Consul
Guatemala: R. M. Napier, Consul
Italy: F. Migliorini, Vice-Consul^(b)
Japan: J. Langdon Parsons, Consul
Lebanon: A. M. Hambour, Consul
Liberia: W. B. Coombs, Consul
Netherlands: E. E. McLaughlin, Consul
Norway: John N. Howe, Consul
Peru: M. J. Hill, Consul
Philippines: C. J. Glover, Consul
Portugal: Raymond F. Walters, Vice-Consul
Sweden: E. M. A. Nicholson, Vice-Consul
 Jose R. Mussared, Vice-Consul
United Kingdom: R. E. Jones, Deputy High Commissioner
United States of America: Kevin J. McGuire, Vice-Consul^(b)

(a) Dean of the Consular Corps

(b) Consul de Carriere

3.4 SEMI-GOVERNMENTAL AUTHORITIES

A semi-governmental authority may be defined as a 'body (other than a local government authority or body whose receipts and payments are included in the public accounts of the Commonwealth, of a State, or of a Territory) created by or under legislation to carry out an activity or activities on behalf of a Government, or a body in which a Government has a controlling interest'.

Some authorities such as marketing boards, which are set up by Acts of Parliament, are not regarded as semi-governmental because their activities are carried out on behalf of industries rather than on behalf of any Government.

Most semi-governmental authorities have independent powers for the recruitment of staff. All possess greater administrative and financial autonomy than Government departments but there is a wide variation in the degree of autonomy accorded, in various aspects, to different authorities.

Activities carried out by semi-governmental authorities include tertiary education, hospitalisation, power supply, public transport, banking services, fire control, irrigation and drainage in rural areas, control and regulation of milk supply, slaughtering of animals for human consumption, housing development, off-course betting and lotteries, and investigation of problems relating to the development of mineral resources.

In appropriate parts of this Year Book some reference is made to the activities of most of the semi-governmental authorities which operate in South Australia.

3.5 LOCAL GOVERNMENT

Early History

On 19 August 1840, less than four years after the colony was founded, the first Colonial Municipal Act was passed by Governor Gawler and his Executive Council to provide elective municipal institutions for towns of at least 2,000 inhabitants. The franchise was granted to adult males who at the time of enrolment had resided in the province for at least six months and who owned or occupied any land, house, warehouse, counting house, or shop within the area, provided that the property was valued at not less than \$40 per annum and the voter lived within seven miles of the property. At the first elections for Adelaide, held on 31 October 1840, four aldermen and fifteen councillors were elected, forming the first elected local government body in Australia.

This first attempt at local government proved unsuccessful, and in September 1843 the Adelaide Corporation became legally defunct. The Government controlled the affairs of the city for the next six years until 1849, when the Governor appointed five City Commissioners to take over the City Administration.

In October 1851 five hundred ratepayers petitioned for restoration of the Council; in June 1852 the Municipal Corporation of Adelaide was reformed under the Municipal Corporations Act, 1849.

Local Government Areas—Number, Size, and Status

At present there are 142 local government areas in South Australia, each controlled by a council consisting of members elected by local ratepayers and exercising powers conferred by the Parliament of the State in the Local Government Act, 1934-1967.

The total area incorporated in local government areas is 57,767 square miles; this is only slightly above 15 per cent of the total area of the State but contains almost 99 per cent of the State population.

There are two major types of local government areas—district council areas and municipalities. Usually district council areas consist predominantly of rural land but contain one or more towns. Generally, to qualify for proclamation as a municipality an area must be used predominantly for either residential, business, industrial, or manufacturing purposes (or a combination of these purposes), and be able to support itself financially. Some municipalities are constituted as cities, the qualification being a population of 15,000 persons for metropolitan municipalities (the twenty-one local government areas which formed the metropolitan area as defined under the Local Government Act and which, prior to June 1966, corresponded to the statistical metropolitan area) and 10,000 persons in other 'country' areas.

There are 21 metropolitan municipalities of which 14 are cities, 23 other municipalities of which 7 are cities, and 98 district council areas.

The Governor may create, abolish, or vary the size, status, or organisation of, any local government area or portion thereof, provided certain requirements are satisfied. Such alterations usually stem from petition by ratepayers or a council.

Functions of Local Government

The Local Government Act, 1934-1967, prescribes most of the 'powers and authorities' which each council shall or may exercise 'for the good government' and 'the management of the affairs' of its area, but some functions devolve from other Acts. To enable it to sue and be sued and to participate in transactions involving the purchase and sale of land and other property each council is constituted as a corporate body.

The functions performed by councils vary somewhat with the area concerned, but there are general functions which are common to them all. Many of these functions receive more detailed attention in the parts of this book dealing with the appropriate subjects, *e.g.* road construction and maintenance in Part 8.3, Physical Development; health services and Local Boards of Health in Part 6.5, Social Environment, and libraries in Part 6.4, Social Environment. Among the many other functions of local governing authorities are the provision of street lighting, the licensing and inspection of slaughterhouses, the maintenance of cemeteries, the maintenance of foreshores and jetties, the control of the location of industries (especially noisy trades), the prevention of fires within certain areas, and the policing of provisions relating to vermin and weeds.

Organisation and Representation

Whereas a municipality must be divided into at least two areas known as wards a district council need not have wards. No council may comprise less than five members, and wards in municipalities must be represented by two councillors. No district council area may be divided into more than ten wards, and the number of councillors for each ward is established by proclamation.

A candidate for election as a councillor must be an adult British citizen owning or occupying ratable property within the area for which he seeks election, must not be a special magistrate, an undischarged bankrupt, a person holding contract or employment under the council, under sentence for a crime, overdue with his rates and any associated fines, or of unsound mind, and must have consented, in writing, to his nomination.

Each year half the number of councillors retire. In councils with wards one councillor from each ward, the one who has been 'the longest in office without re-election', retires; in other councils the councillors who did not retire one year do so the next. In all cases a retiring councillor is eligible for re-election.

Any municipality may apply to add no less than three and no more than six aldermen to its council. The qualifications for councillors apply to aldermen, except that aldermen are not bound by the limits of wards, and an alderman must have served at least one year as a member of the council. Although the functions of aldermen are not specifically defined the concept is that they should impartially consider the interests of the area as a whole and so resolve any conflict which may arise between sectional interests represented by councillors.

The mayor of a municipality is elected annually on the same basis as an alderman. The chairman of a district council is chosen annually by councillors from among their number.

Franchise

Adult British subjects who either own or occupy ratable property within an area are eligible to be enrolled for, and to vote at, elections for that area provided that they are not in arrears with their rates. Companies or corporations owning or occupying ratable property within the area are entitled to nominate up to three persons to vote on their behalf at the elections for that area, depending on the method of valuation; the entitlement is for the nomination of one vote for each \$300 of annual (improved) value or \$2,000 of unimproved (land) value or part of either, up to three voters for any one property. Special provision is also made to allow certain defence personnel to vote.

Officers and their Functions

Each council may appoint any officers it considers necessary to carry out its duties, including special constables to facilitate the maintenance of law and order within its area.

Each council must appoint a town clerk (in a municipality) or a district clerk (in a district council) as the chief administrative officer, and an auditor.

Employment in local government administration is now regarded as a career; most town and district clerks are full-time employees, and councils are required to employ in those positions only those persons who have passed examinations qualifying them for the work. The town or district clerk maintains the voters roll and in many cases is appointed returning officer for elections. The characteristics of particular areas determine to some extent the nature of the duties performed by town and district clerks; they often undertake a very wide variety of functions, especially in smaller areas, where even the part-time employment of specialist officers for particular tasks is not warranted.

The auditor for each council is appointed for a term of two years. He is not eligible for appointment unless he holds a Local Government Auditor's Certificate of competence issued by the Local Government Auditors Examining Committee.

Whenever a council itself undertakes a new assessment of property values within its area it is required under the Local Government Act to appoint a valuator who recommends to the council a valuation of each property for rating purposes. A ratepayer may appeal against a council's valuation of his own property or that of another ratepayer. Instead of undertaking its own assessment of property values it is now not uncommon for a council to adopt the valuations of the Engineering and Water Supply Department (annual or 'improved' values) or the State Land Tax Department (unimproved or 'land' values). When this is done a council avoids the necessity for employing a valuator but a fee for each valuation is payable to the appropriate department. There is no right of appeal to the council against valuations so based, the right of appeal lying against the departments concerned when they make their valuations.

Finance

Local government authorities derive their revenue from many different sources, including sundry licences and fines, but the principal sources are rates, loans raised against the security of future rates, and Government grants. The relative importance of these sources of revenue varies between areas and through time within areas, *e.g.* in closely settled well developed areas rate revenue is usually predominant; in large sparsely settled areas Government grants, mainly for road works, may at times be the chief item of revenue; in areas being rapidly and extensively developed for housing or industrial purposes both Government grants and loan funds may be prominent.

Commonwealth Government grants are not made direct to local government authorities but are administered by appropriate State Government departments. The most important example of this is the distribution of portion of Commonwealth aid roads grants to local government authorities by the Highways and Local Government Department in conjunction with the State Treasury.

A large proportion of local government expenditure from both loan funds and other revenue is for the construction and maintenance of roads, footpaths, and stormwater drains.

More detailed attention is given to local government finance in Part 12.5.

PART 4

LAND SETTLEMENT

4.1 LAND TENURE

IDENTIFICATION OF LAND AND REGISTRATION OF TITLE

To facilitate the identification of land, the southern portion of the State encompassing all the arable land and certain pastoral areas has been subdivided into counties, these in turn being generally subdivided into smaller units known as hundreds.

The first Surveyor-General, Colonel Light, had been instructed by the Colonisation Commissioners to divide the colony into towns and counties, and in 1842 the first nine counties were proclaimed. At the same time the administration was having considerable difficulty in regulating the leasing of unsold lands for pasturage. To assist it was proposed in 1846 that boundaries of areas smaller than counties be created and the system of hundreds in use in some counties in England was adopted.

The boundaries of early counties and hundreds followed natural features. As further counties and hundreds were declared, natural features suitable for boundary delineation were not always available and in most cases the boundaries were set parallel to lines of longitude and latitude.

In 1887 an area of 250,000 acres was declared to provide for the town and irrigation area of Renmark on the River Murray. Similar areas were subsequently surveyed and proclaimed adjacent to other sections of the river.

There are currently forty-nine counties covering 23 per cent of the State, the last of these being declared in 1933. The counties have an average size of 1,143,000 acres, varying from County Light, north of Adelaide, with 536,960 acres to County Jervois on Eyre Peninsula with 2,368,000 acres.

Counties are generally subdivided into hundreds, although four northern counties remain undivided and a number of others are only partly subdivided. There is considerable variation in the size of hundreds, while the number of

hundreds in a completely subdivided county varies from eight in Counties Alfred and Kintore to thirty-four in County Jervois. New hundreds are created from time to time, the present total being 534.

Hundreds are further subdivided into sections which in turn may be divided into allotments or occasionally blocks.

Land is therefore, for the purposes of title generally identified by the county, hundred, and section, and where appropriate block or allotment within which it falls. Land in towns and in proclaimed irrigation areas may further be identified as falling within that town or area.

Torrens System of Land Registration

Land transactions in South Australia are conducted under the Torrens System of land registration as provided by the Real Property Act, 1886-1967. This system, first introduced by the Real Property Act, 1858, was named after its author, Sir Robert Torrens, who was at that time Registrar-General of the colony.

All land transactions to this date had been conducted by the conveyancing of the general law titles, a procedure which was cumbersome, costly and uncertain, and particularly unsuited to a fledgling colony with a large number of landowners and where land transactions were frequent.

Torrens had previously been Collector of Customs and in this role had been impressed by the relatively simple principles involved in the transfer of shipping property, principles which he argued could be applied to land transactions. His proposals were to lead to similar legislation in the other Australian States, and have subsequently been adopted in other parts of the world.

The Torrens System provides that the matter of title to land shall be a government responsibility. Each piece of land is represented by a certificate of title which, with very few (and in practice unimportant) exceptions, is guaranteed by the State. Retrospective examination which is necessary with general law title is eliminated and the costs and time involved in conveyancing can thus be kept to a minimum.

The Real Property (Registration of Titles) Act, 1945, provided for the small proportion of land then remaining under the general law to be converted to the Torrens System. This transition is still in progress in certain areas.

The table below shows details, extracted from records at the Lands Titles Registration Office, of sales of real estate during the five years to 1967.

Sales of Real Estate, South Australia

Year	Number of Sales	Consideration
		\$'000
1963.....	30,170	205,149
1964.....	34,066	261,410
1965.....	32,758	259,828
1966.....	31,375	258,308
1967.....	30,492	259,178

SYSTEMS OF TENURE

HISTORICAL

The sale of Crown land played an important role in the establishment of South Australia. At the time of the first settlement the 'Wakefield System' of colonisation was held in favour and it was thus planned that the new colony be largely self-supporting with revenue coming from the sale of land. This proposal was agreed to, with the proviso that land to the value of \$70,000 be sold in England prior to settlement. After considerable difficulty 60,595 acres were disposed of for \$72,714. Early applications for land were made by tendering at a fixed price and 323,000 acres of land had been thus disposed of by 1843 when sales by auction were introduced. By 1857, 1,756,000 acres had been alienated at an average price of \$2.52 per acre. In 1846, under the Waste Lands Act, land outside the hundreds was leased for pastoral purposes for periods up to fourteen years, and leases within the hundreds date from 1850. The term of these leases was extended to twenty-one years in 1864 and to forty-two years in 1890.

Land sales prior to 1869, involving 3,790,185 acres at a total purchase price of \$8,963,612, were conducted on a cash basis. However, in that year sales on credit were introduced, with payments initially spread over four years and later extended to twenty years. Land not sold at auctions was offered on twenty-one year leases, and in the late 1880s leases with a right to purchase and leases in perpetuity were introduced. From 1886 gold, and from 1888 other metals and minerals, in lands sold by the Government were reserved to the Crown. Perpetual leases were first introduced in 1888. Early leases provided for a revaluation of rents every fourteen years, but in 1893 provision was made for rents to be fixed in perpetuity.

The introduction of the current system of allotting lands in preference to sales by auction led to the appointment of the Land Board in 1886 and the Pastoral Board in 1893. The principles of closer settlement whereby the Crown repurchases and subdivides suitable lands, were introduced in 1897.

With the introduction in 1903 of agreement to purchase—a form of tenure leading to freehold—the present day pattern of tenure was completed. Subsequent legislation has been devoted to variations in the basic concepts of freehold, agreement to purchase, perpetual lease, pastoral lease and miscellaneous lease.

LAND ADMINISTRATION

Approximately 90 per cent of the occupied area of South Australia comprises Crown land held under lease and as such is controlled by the Department of Lands. This department is charged with the general administration of Crown lands, and with making available under appropriate tenure newly developed lands and such lands as come into the hands of the Crown by resumption, expiry, surrender or forfeiture of existing tenure. The consent of the Minister of Lands (or the Minister of Irrigation in the case of irrigated lands) is required prior to the transfer, mortgage or sublease of any of the forms of tenure administered by the department.

Land available for leasing is allotted by the Land Board and, in the case of pastoral lands, by the Pastoral Board, who interview applicants and make allotments on merit. The Boards also advise the Minister on matters connected with land settlement.

Leases and licences under the various mining Acts are issued and supervised by the Department of Mines, while the Woods and Forests Department and the Engineering and Water Supply Department are responsible for the issuing of leases over reserves and areas under their control.

CURRENT TENURE

In the table below, occupied land in South Australia is classified according to its present form of tenure. Thus 'Areas sold, dedicated etc.' do not represent the accumulated total of all alienated lands, as certain alienated lands repurchased by the Crown are currently held under leases.

At 30 June 1967 land in South Australia was occupied as follows:

	Area	Proportion
	Acres	%
Area sold, dedicated etc.:		
Sold	14,979,636	6.16
Free grants	916,634	0.38
Dedicated (a)	289,136	0.12
Under agreement to purchase	337,574	0.14
Total	16,522,980	6.80
Area under lease and licence (b):		
Perpetual	20,709,475	8.51
Pastoral	125,689,390	51.67
Other	2,793,490	1.15
Total	149,192,355	61.33
Area in occupation	165,715,335	68.13
Remainder of State:		
Lakes and lagoons	7,904,800	3.25
Open for allotment or selection	21,951	0.01
Other vacant land (c)	69,602,714	28.61
Total area of State	243,244,800	100.00

(a) Includes State forest reserves.

(b) Includes areas held under Mining Acts.

(c) Includes surveyed roads, railways and other reserves, 22,877,721 acres of which 18,833,822 acres are set apart as Aboriginal reserves.

In 1901 the area sold, granted and leased, i.e. the area occupied, was 93,666,052 acres, increasing to 141,907,525 in 1924, but falling to 129,411,612 in 1931 due to decreased areas under pastoral lease. Since 1931 there has been a fairly steady increase to the present figure of 165,715,335 acres.

METHODS OF ALIENATING LAND

Sales under Agreement to Purchase

There is provision for Crown lands to be alienated through an agreement to purchase although this method is not used to any great extent at present.

The purchase money is repayable over varying terms not exceeding sixty-four years and the purchaser must comply with certain special conditions concerning the improvement and the development of the land, including the fencing of the property within the first five years. It is not necessary for an agreement to run the full term as, subject to the Minister's approval, purchase may be completed after six years provided all such conditions have been complied with. When allotting land, preference is given to the applicant who agrees to reside on the land. No land may be allotted under an agreement to purchase where the resultant total holdings would exceed \$25,000 in unimproved value, or if

used for pastoral purposes, where the carrying capacity exceeds 5,000 sheep (10,000 sheep outside certain areas scheduled in the Crown Lands Act). Existing agreements may, however, be transferred up to a maximum holding of \$36,000 unimproved value or, except in certain areas, 4,000 acres. Land allotted under Agreements to Purchase amounted to 362 acres in 1966-67.

Sales at Auction

Certain Crown lands may be sold at auction for cash. These include town lands, suburban lands exempt from the operations of the Land Board, and Crown lands which have been offered for lease and not taken up within two years. Town lands so sold are subject to limitations on resale and conveyance through mortgage during the first six years, and it is usually conditional that improvements, for an agreed function and of a certain minimum value, be erected within a stipulated period.

Free Grants and Reservations

A free grant of Crown lands may be made for any public purpose. Of the 916,634 acres thus alienated at 30 June 1967, 768,000 acres had been granted for the Weapons Research Establishment. Lands may also be dedicated and reserved for a variety of purposes such as forest areas, Aboriginal reserves, wild life reserves, parklands, schools and defence establishments.

METHODS OF LEASING AND LICENSING LAND

Leases for Limited Terms

Pastoral lands outside the counties and large areas in the northern counties are held under pastoral leases granted for terms of forty-two years (except in the case of previously unoccupied lands when the term is twenty-one years). Under the conditions of these leases the lessee must expend in improvements a sum as recommended by the Pastoral Board and must comply with certain conditions on stocking. Rent is based on the unimproved value of the land and in the case of a forty-two year lease is revalued every seven years. Such lands may be reallocated to the same lessees on expiry of the existing terms.

Persons may be granted a permit to search for water and if successful may take up a lease of 100 square miles of land. Such leases are granted for forty-two years at a nominal rental for the first ten years and a low rental thereafter. Conditions of stocking are also modified.

In certain circumstances, such as where land has not been surveyed or its potential is uncertain, or where permanent alienation is not desirable, miscellaneous leases are issued for periods up to twenty-one years. Certain business and industrial sites may also be held under miscellaneous lease. Annual licences may be granted over Crown lands for certain industrial sites, grazing areas, fishermens residences, holiday shack sites and other approved purposes.

Land reserved for the Woods and Forest Department may be leased for cultivation or grazing purposes for a period not exceeding forty-two years. At 30 June 1967, approximately 7,000 acres of forest land were under lease.

Perpetual Leases

Leases in perpetuity may be offered over Crown lands which have been surveyed. The lessee is required to provide boundary fencing and to clear and render available for cultivation a certain proportion of the land within a specified period. Where considered desirable it is conditional that the lessee reside on the property.

No lease may be allotted which would bring the unimproved value of total holdings in excess of \$25,000 except where the land is suitable for pastoral purposes only. Existing leases may, however, be transferred to a landowner up to an accumulated holding of \$36,000 unimproved value or, except in certain areas, 4,000 acres. In certain cases special perpetual leases are available under which no rent is payable for the first four years, and with less than full rent over the next six years.

Sections in government controlled irrigation areas are offered on perpetual lease and, if the land has not been cultivated before, rents and water rates are payable on a sliding scale for the first three years. Certain improvements are to be made and the lessee may be required to reside on the land for nine months of the year. Town allotments in irrigation areas may be offered under perpetual lease either at auction, by calling applications, or may be let on annual licence. Allotments not sold at auction may be sold by private contract.

During 1966-67, 209 acres in irrigation areas were allotted under perpetual leases.

MINING CLAIMS, LEASES AND LICENCES

Mineral Lands

Mineral lands are lands in which the mineral rights are reserved to the Crown and include Crown lands, lands under Crown lease and lands alienated from the Crown after 1886. Mineral lands which are used as a site for buildings, dams, etc., or which are cultivated, are exempt from mining as are certain areas which may be exempted either permanently—as with Aboriginal reserves—or temporarily, e.g. to facilitate a Department of Mines survey. Public reserves, streets and highways are subject to regulations protecting the public user.

A current miner's right (which forms the basis of all operations under the Mining Act) must be held by every independent prospector, and authorises the holder to prospect for any metal, mineral, precious stones, salt, gypsum or coal on mineral lands. A miner's right does not of itself confer the right to enter on private lands. The prospector may acquire a claim carrying with it the right of possession of minerals found, (with the exception of salt and gypsum which cannot be worked until a lease has been obtained). Claims are issued with a tenure of one year only and are designed to enable the holder to prove the deposit before applying for a long term lease. Claims may be renewed at the expiration of each year of tenure.

The holder of a claim (other than an alluvial gold claim or a precious stones claim) may be required to take a lease of his claim, if at any time payable results are achieved. In the case of salt and gypsum, application for a lease must be made within twenty-one days of acquiring a claim. A lease (other than a Special Mining Lease) may be for any term up to twenty-one years. The maximum size of claims and leases and of working conditions imposed, vary with the nature of the mineral.

An annual rental, and a royalty on gross profits are payable by the lessee to the Crown. Special Mining Leases may be granted for a term of up to two years, under terms and for an area fixed by the Governor. These are for exploration only.

Petroleum and natural gas, whether on mineral lands or not, are the property of the Crown. Exploration for, and production of, petroleum and natural gas is controlled by the Petroleum Act 1940-1967 by virtue of the appropriate form of licence. A petroleum exploration licence is granted for a term of five years for an area not exceeding 10,000 square miles.

A petroleum production licence is granted for a term of twenty-one years, with a maximum area of 100 square miles, and provides for a royalty of 10 per cent of the value at the well-head of all petroleum recovered from the land comprising the licence.

Lands with Mineral Rights Alienated

The mineral rights of lands sold by the Crown prior to 1886 were alienated with the land.

The prospecting and mining of such land may be carried out either under a private agreement with the owner or under authorisation of a warden of the Department of Mines. Where a lease is issued by the department, the bulk of any rents and royalties collected is paid to the owner.

At the discretion of the Government certain lands may be reserved from mining operations, and other lands are exempted by the nature of their use.

Areas Held under Mining Acts, South Australia

At 30 June

Particulars	1963	1964	1965	1966	1967
			Acres		
Claims.....	13,562	12,483	14,298	16,190	17,169
Leases	5,739,722	7,881,612	6,606,993	29,621,476 (a)	15,489,944
Oil licences	197,744,640	228,234,240	221,059,840	237,591,040	240,791,040

(a) Lands held under special mining leases accounted for 15,410,560 acres of land occupied under lease at 30 June 1967.

Mineral royalties received by the Department of Mines during 1966-67 amounted to \$1,092,000.

4.2 LAND SETTLEMENT SCHEMES

CLOSER SETTLEMENT

There is provision in the Crown Lands Act for acquisition of land for subdivision in the interests of closer settlement. Such land is divided into blocks not exceeding \$14,000 in unimproved value, and offered under conditional agreements to purchase with payment over thirty-five and sixty-four year periods.

No land has been purchased for closer settlement since 1952-53, by which time 948,885 acres had been purchased at a cost of \$5,730,400, including 51,872 acres set apart for returned service personnel from the 1914-18 War, 3,214 acres for forest and water conservation purposes and 26,563 acres purchased in connection with the reclamation of River Murray swamp lands.

At 30 June 1967 a total of 203,906 acres of closer settlement lands were held under agreements to purchase or lease.

MARGINAL LANDS SCHEME

The excessive opening up of the drier marginal lands for wheat growing resulted in many settlers in these areas being forced to leave their holdings, particularly in the 1930s.

Investigations showed that if the settlers were to succeed, cereal growing would need to be replaced by grazing, and in 1939 the Commonwealth Government established a trust fund to assist development in this direction. The money was

used to purchase properties from certain settlers with a view to enlarging the holdings of others, to provide fencing and water supplies and to pay small grants to settlers vacating holdings in which there was no equity. Commonwealth grants totalled \$1,426,000, all of which has been expended.

CROWN LANDS DEVELOPMENT

The Crown Lands Development Act, 1943, administered by the Department of Lands, provides for the development of Crown lands, or lands which the department may purchase, and for the allotment of such lands to suitable settlers.

A substantial proportion of the land under the Act was developed with the object of inclusion in the War Service Land Settlement Scheme. Properties not accepted for the scheme were subsequently allotted under the Act, and since then a number of individual properties have been surrendered to the Crown for development and re-allotment to the former holders.

ASSISTANCE FOR RETURNED SERVICE PERSONNEL

1914-18 War

Following the 1914-18 War the State Minister for Repatriation was authorised to acquire land for the purpose of re-settling discharged servicemen. Such land could be purchased by agreement or acquired compulsorily, whether held in fee simple or under Crown lease. Crown lands could also be set apart for this purpose. The land acquired was subdivided where appropriate and offered under agreement to purchase, perpetual lease or a term lease. Provision was also made for the discharging of existing mortgages on freehold properties already held by ex-servicemen, with fresh mortgages in favour of the Minister of Repatriation.

In all 3,801 ex-servicemen were settled under this Act with 3,008 settling in 'dry lands' and 793 in irrigation areas.

1939-45 War and Korea-Malaya Operations

War Service Land Settlement

Under the War Service Land Settlement Scheme, provision was made for the settlement on rural holdings of certain ex-servicemen from the 1939-45 War and Korea and Malaya operations.

Suitable Crown land was made available and other land was acquired. This land was subdivided and developed to a stage where it could be brought into production by the individual settler within a reasonable time. Basic structural improvements were provided and it was then offered to eligible settlers on perpetual lease. Credit facilities are available to these settlers for working capital, the purchase of stock and equipment, and the effecting of further improvements.

During the first year after allotment in the case of 'dry lands' settlers, and the first year after an irrigation holding became self-supporting the settler was granted a living allowance and was exempted from the payment of rent or interest in respect of the holding, and of payments on account of principal or interest in respect of advances, other than advances for working capital. Provisions exist for a settler on 'dry lands' to convert property to freehold after a period of ten years by the payment of a fixed purchase price and the repayment of all advances. There is no provision for freeholding in government irrigation areas.

The State Department of Lands administers the War Service Land Settlement Scheme on behalf of the Commonwealth Government. The Commonwealth provides the funds and meets the costs of the scheme with the exception of administration costs and two-fifths of any losses, which sums are met by the State Government.

All large scale development operations under the scheme have now been completed. The principal areas settled are in the South East, on Kangaroo Island, Eyre Peninsula, and in irrigation areas along the River Murray.

The following table shows for selected years the number of farms allotted and total expenditure under the War Service Land Settlement Scheme.

War Service Land Settlement, South Australia
Farms Allotted and Total Expenditure to 30 June

Particulars	1953	1956	1959	1962	1965	1967
Farms allotted:						
Number	517	718	984	1,015	1,022	1,029
Area ('000 acres)	219	343	623	671	688	700
	\$'000					
Expenditure:						
State	<i>n.a.</i>	<i>n.a.</i>	3,310	4,742	6,612	6,924
Commonwealth;						
Acquisition of land	3,934	4,768	6,358	6,914	6,836	6,836
Development and Improvement of land	13,512	19,872	25,414	28,214	29,748	30,126
Provision of credit facilities	2,620	4,982	8,690	18,852	27,008	31,421
Other	640	1,668	3,634	6,472	9,454	10,049
Total expenditure by Commonwealth	20,706	31,290	44,096	60,452	73,046	78,432
Total expenditure	<i>n.a.</i>	<i>n.a.</i>	47,406	65,194	79,658	85,356

n.a.—Not available.

Loans and Allowances (Agricultural Occupations) Scheme

The Commonwealth Government through the State Bank of South Australia provided financial assistance for the establishment or re-establishment of ex-servicemen in agricultural occupations. Loans were made for a variety of purposes and non-repayable allowances were made where income during the course of re-establishment proved to be inadequate. The payment of allowances and the advancing of new loans ceased in 1956-57 by which date loans totalling \$2,009,096 had been made to 1,288 ex-servicemen, and allowances totalling \$649,218 had been granted to 2,264 ex-servicemen.

An additional Marginal Lands Improvement Fund was established in 1943 from which expenditure of \$416,381 had been made by 30 June 1967 by the Department of Lands.

PRIVATE LAND DEVELOPMENT SCHEMES

The most important private scheme in South Australia has been a project, begun in 1949 by the Australian Mutual Provident Society, involving the development of a considerable area of land in the south-east of the State in what was previously known as the Ninety Mile Desert. The development of this area was made possible by the discovery that the retarded nature of the country was due to certain soil deficiencies, and that these deficiencies could be overcome by the addition of trace elements (mainly copper sulphate and zinc sulphate) to the soil.

Large tracts of unimproved land were obtained either by purchasing existing leases or by Crown allotment. Intending settlers were employed by the society in the development work, covering a period of approximately five years, and were then allotted a holding over which they had a perpetual lease title. The society provided finance for the purchase and for stock, plant and working expenses. In all 96,000 acres were taken up by employees of the society.

In addition to the development of land for employees a large area was handed to various stages of development and sold to the public, sales in this category amounting to 327,000 acres.

ADVANCES TO THE RURAL SECTOR

Government Advances

In addition to advances made under schemes mentioned above, the State Bank administers certain funds provided by the State for rural development.

Under the Advances to Settlers Act, 1930-1958 the bank makes advances to settlers for a variety of purposes including general improvements, the purchase of livestock and the discharging of existing mortgages. The Loans to Producers Act, 1927-1962 empowers the bank to make advances for certain developmental projects and the purchase of certain capital equipment. The bank also administers acts providing loans for the construction of vermin-proof fencing, general fencing and the laying of water piping.

Advances outstanding at 30 June for the four most recent years are shown in the following table.

Advances to Settlers, South Australia

Particulars	1964	1965	1966	1967
	\$'000			
Department of Lands:				
Closer settlement	437	398	366	344
Soldier settlers (1914-18 War)	708	641	580	520
Returned service personnel (1939-45 War)	12,153	12,816	12,749	12,341
Crown lands development	709	730	716	701
State Bank of South Australia:				
Advances to settlers	1,000	1,092	1,177	1,197
Loans to producers	6,004	6,899	7,768	8,087
Vermin and fencing advances	84	78	77	67
Total	21,095	22,654	23,433	23,257

Private Institutional Advances

Many financial institutions advance funds for rural development.

At January 1967 the major trading banks (including the Commonwealth Bank) had advances outstanding to residents of South Australia and the Northern Territory, employed in agriculture, dairying and grazing, of \$52.5 million. At January 1967 branches of major pastoral finance companies located in South Australia had \$45.5 million outstanding on similar advances.

PART 5

POPULATION

5.1 THE CENSUS

PRE-FEDERATION ACTIVITY

Early 'musters'

Population returns in one form or another have existed from a very early period in the history of Australia. The earliest enumerations were known as 'musters', and although the actual results of very few of them have been preserved, it is probable that during the early days of colonisation they were of frequent occurrence. The first official 'muster' was taken in 1788 soon after the new settlement at Sydney Cove was formed, and in 1803 the first 'muster' of convicts in Van Diemen's Land (now Tasmania) was conducted. The material on the census in the following pages has been derived in the main from Statistician's Reports for successive Commonwealth censuses. These provide a continuous record of census developments in Australia since 1911, and should be referred to for greater detail than can be included herein.

Development of the census

The first regular census in Australia was taken in New South Wales in November 1828, and included the population of Moreton Bay (now Queensland) but not Van Diemen's Land (Tasmania). Details of the names, ages and civil conditions of the inhabitants were sought. The next census was taken in 1833, and was followed by another in 1836, when arrangements were made for the enumeration of the population of the newly-established settlement at Port Phillip (Victoria). The first censuses taken in Tasmania, Victoria and Queensland as separate colonies were in 1841, 1854 and 1861 respectively. The first regular census in South Australia was taken in 1844 and in Western Australia in 1848. The 1881 census was the first simultaneous census taken in Australia and formed part of the first simultaneous census of the British Empire.

Census conferences

Although the census methods adopted in the several Australian colonies, being based on a common prototype (*i.e.* the English methods), conducted towards general uniformity, nevertheless it appeared evident in the course of time that the methods of inquiry and tabulation were in certain respects ill-adapted to Australasian conditions. In 1890, therefore, a Conference of Statisticians was held at Hobart for the purpose of preparing a scheme by means of which the census information could be collected and tabulated throughout Australasia in a uniform and effective manner. The Conference resulted in considerable improvement in the degree of uniformity attained in the censuses of 1891 and in the increased fruitfulness of the inquiries. In 1900 another Conference of Australasian Statisticians was held in Sydney with the object of agreeing to such measures as would lead to uniformity in regard to: (a) the date of the census, (b) the subjects of the inquiry, and (c) the methods of compilation and tabulation. (New Zealand was represented at both these pre-Federation Conferences.) Briefly, the results of the Census Conferences of 1890 and 1900 were to bring about the adoption of a uniform procedure by which the census authorities throughout Australia agreed to institute the same inquiries on the same date, and to present the results in the various reports drawn up by them, as nearly as practicable, in the same manner. Although uniformity on the form of the schedule was attained, minor differences arose as to the interpretation of terms. Moreover, the method of presentation of the results differed considerably, the results of all the inquiries were not tabulated in all cases, and there was no co-ordinating authority to bring the results together to form a total for Australia. At the census of 1911, the first census taken under the aegis of the Commonwealth Government, the control of the census of the whole of Australia was centralised in the Commonwealth Statistician, thus enabling the attainment of (a) substantial identity in the method of collection, (b) identity of categories under which the returns were to be tabulated, and (c) uniformity in the interpretation of terms and in the scheme of presenting facts.

CENSUSES OF THE COMMONWEALTH

Under the Commonwealth of Australia Constitution Act of 1900, 'Census and Statistics' became Commonwealth functions. Provision for census-taking under Commonwealth law was not made until the *Census and Statistics Act* 1905. The census of the Commonwealth of Australia is taken under the authority of this Act (now *Census and Statistics Act* 1905-1966) and the regulations made thereunder. The first Australian census collected under the Act was that of 1911; subsequent censuses were taken in the years 1921, 1933, 1947, 1954, 1961, and 1966. The Act provided that the census should be taken by means of a householder's schedule delivered to every dwelling and that this schedule should contain particulars of the dwelling and its inmates.

Periodicity and date of the census

The *Census and Statistics Act* 1905 provided that the Census should be taken 'in the year one thousand nine hundred and eleven and in every tenth year thereafter'. But in 1930 this was amended by the addition of the words 'or at such other time as is prescribed'. Because of the economic depression prevailing in 1931 the third Australian census was not taken until 1933, and because of war conditions the fourth Australian census was not taken until 1947. Consideration was then given to the practicability of holding future censuses in the series of years originally envisaged. However, it was considered that the interval of years from 1947 to 1951 was too short; therefore it was decided to take the fifth census in 1954 at the mid-point of the period from 1947 to 1961. The sixth census was held in 1961. Because of the administrative demand for more frequent counts of the population the seventh census was held in 1966.

The Census and Statistics Act provides that 'the Census day shall be a day appointed for that purpose by proclamation', but the actual date is not specified. The census is conducted on a strictly *de facto* basis, i.e. it records the population actually in Australia at the place where located on census day (as distinct from a *de jure* basis, which records the population according to place of usual residence). In the selection of census day every endeavour is made to choose a date when there is a minimum displacement of population. In 1911 and 1921, census day was near the beginning of April, but in 1933 and subsequently, census day has been at or near the end of June because this time has fulfilled the condition mentioned and is otherwise suitable, being the end of a fiscal year and of a quarterly period used extensively for statistical purposes.

Scope of the census

The census covers the population of the Commonwealth and the dwellings in which it lives.

Until 1967 the only persons excluded from Census results were:

- (i) diplomatic representatives of other Governments and their families and staffs having diplomatic immunity in accordance with international practice;
- (ii) full-blood Aboriginals, pursuant to Section 127 of the Constitution which specifically excluded them from the count of the population.

However, following the results of a Commonwealth referendum held in 1967, Section 127 of the Constitution was repealed and in future Censuses, full-blood Aboriginals will be included.

Instructions to field staff determine how various fringe categories of persons are to be treated for census purposes. Broadly the principle is to record at the census babies born at or before midnight of census day and to exclude persons dying before midnight of census day. Travellers on ships in or between Australian ports at midnight of census day are also included.

For census purposes the Act defines a dwelling thus: '“Dwelling” means a building, erection, or tenement, whether permanent or temporary, which is wholly or partly used for the purpose of human habitation and includes any ship or other vessel in any port of the Commonwealth or in any inland waters thereof, or any ship or vessel on a passage between any two Commonwealth ports'. Section 10 (2) provides that 'where a building is let, sub-let or held in different apartments and occupied by different persons or families, each part so let, sub-let, or held and used for the purpose of human habitation shall be deemed a dwelling'.

Measurable characteristics such as 'class' of dwelling, materials of outer walls, number of inmates in relation to number of rooms, facilities and rentals are recorded. At the 1966 census particulars were recorded for *ten* separate 'classes' of private dwellings and *sixteen* 'classes' of non-private dwellings.

The census data on occupied dwellings are obtainable from the completed householder's schedules. However, census collectors are responsible for recording, from personal observations or inquiry, particulars also of dwellings which are unoccupied on census day, including those temporarily unoccupied or those used for 'holiday purposes'. Dwellings not recorded at the census are those occupied by accredited persons having diplomatic immunity and dwellings occupied solely by full-blood Aboriginals.

The provisions of the Act place the responsibility for completing a householder's schedule upon the 'occupier of a dwelling'. The term 'occupier' is not

defined beyond specifying certain officials in charge of public or charitable institutions who are to be included under this head. In practice, the responsibility, in the case of all private dwellings, is considered to rest with the head of the household occupying the dwelling.

Censuses have been taken in each of the External Territories of Australia concurrently with the Commonwealth census. These censuses, taken under the authority of the relevant Ordinances, cover the Territory of Papua and New Guinea, the Territory of Norfolk Island, the Territory of Nauru, the Territory of Cocos (Keeling) Islands, and the Territory of Christmas Island.

Commonwealth Parliamentary representation and the census

The Representation Act 1905-1964 provides:

'2. For the purpose of determining the number of Members of the House of Representatives to be chosen from time to time in the several States, the Chief Electoral Officer of the Commonwealth shall at the times and in the manner prescribed by this Act ascertain the numbers of people of the Commonwealth, and the numbers of the people of the several States.

'3. The day on which any Census of the people of the Commonwealth is taken shall be an Enumeration Day within the meaning of this Act.

'4. The numbers of the people shall be ascertained as on Enumeration Day in accordance with the following provisions:—

(a) The numbers of the people of each State, as shown by the Census, shall be taken.

(b) There shall be excluded from the reckoning the number of persons, who, by Section twenty-five of the Constitution are required not to be counted.

'5. All Statistical Officers of the Commonwealth . . . are hereby authorised and required to furnish to the Chief Electoral Officer all such statistical information as he requires to enable him to ascertain the numbers of people in accordance with this Act.

'6. The Chief Electoral Officer shall forthwith after he has ascertained the numbers of the people in accordance with this Act, make and forward to the Minister a certificate setting forth the numbers of the people of the Commonwealth and of the several States as on Enumeration Day.'

After each census the Chief Electoral Officer requests the Commonwealth Statistician to supply the information required for the purposes of the Representation Act. From such information the Chief Electoral Officer prepares the requisite certificate and this is published in the *Commonwealth Gazette*.

The census schedule

The content of the householder's schedule used in the seven Commonwealth censuses 1911 to 1966 has not been subject to great variation. The questions asked have generally been those which are essential to provide a basic statistical framework of the characteristics of the population and dwellings of the Commonwealth of Australia. These questions have sought to serve both the general interest and the particular interests of those concerned in governmental policy making, in commerce and industry, and in demographic, social and economic research. While serving these local or national interests the need for international comparability has also been borne in mind when framing questions. The consistency in content of the householder's schedule is attributable in part to the mandatory questions included in accordance with the Census and Statistics Act and prior to 1967 to the constitutional requirement to distinguish persons of Aboriginal race.

**Personal Particulars Obtained on Householder's Schedules^(a) Censuses
1911 to 1966**

(x Indicates information obtained for census concerned)

Particulars obtained	Census						
	1911	1921	1933	1947	1954	1961	1966
Particulars obtained on 1966 Schedule							
Name	x	x	x	x	x	x	x
Relationship to head of household	x	x	x	x	x	x	x
Sex	x	x	x	x	x	x	x
Age	(b)x	(b)x	(b)x	(b)x	(b)x	(b)x	(d)x
Particulars as to marriage:							
Marital status	x	x	x	x	x	x	x
Duration of existing marriage	(e)x	(f)x	x	x	x	x	x
Family born to existing marriage (living or dead)	(g)x	(g)x	..	x	x	x	x
Religion (optional)	x	x	x	x	x	x	x
Birthplace	x	(h)x	x	x	x	x	x
Period of residence in Australia of persons born outside Australia	(i)x	(i)x	x	x	x	x	x
Nationality	(j)x	x	x	x	x	x	x
Race	x	x	x	x	x	x	x
Education:							
Standard of education	(k)x	(k)x	(k)x	..	..	..	(l)x
Attending school, university, etc.	x	x	(m)x	..	..	..	..
Persons not engaged in industry	x	x	x	x	x	x	x
Economic activity(n):							
Status, occupation and industry;							
Occupation status	x	x	(o)x	x	x	x	x
Occupation	x	x	x	x	x	x	x
Industry	(p)x	(p)x	x	x	x	x	x
Place of work .....	..	..	..	..	x	x	x
Professional qualifications, trade training, etc. ....	..	..	..	..	..	x	(q)x
Usual hours worked per week .....	..	..	..	..	..	..	x

Particulars not obtained in 1966 but obtained at a previous census

Dependent children (under 16 years of age) ..	..	(r)x	x	x	..	..	..
Blind, deaf and dumb	x	x	x	..	..	..	..
War service .....	..	..	x	..	..	..	..
Income .....	..	..	x	..	..	..	..
Orphanhood .....	..	..	x	..	..	..	..
Not at work (n):							
Duration	x	x	x	x	x	x	..
Reason for not seeking work .....	..	x	x	x	x	x	..
Seeking work but not able to secure ....	..	x	x	x	x	x	..
Persons not engaged in industry	x	x	x	x	x	x	..
State or Territory of usual residence (if temporarily absent) .....	..	..	..	..	..	x	..

(a) The exact wording of questions has not remained constant from census to census. (b) Age last birthday. In 1911 age last birthday was requested only if date of birth was not known. (c) Also date of birth. (d) Age in years and completed months. (e) Date of existing marriage only. (f) Also date of existing marriage. (g) Also number of children (living or dead) from previous marriage. (h) Self, father and mother. (i) Also date of arrival. (j) British and foreign only. (k) Ability to read and write English, a foreign language, etc. (l) Highest level of schooling completed. (m) For subsequent Censuses classified separately under 'Persons not engaged in industry'. (n) The following questions, relating to employment and unemployment were asked at the 1966 census of all persons fifteen years of age and over. Did the person have a job or business of any kind last week (even though he may have been temporarily absent from it)? Did the person do any work *at all* last week for payment or profit? Was the person temporarily laid off by his employer without pay for the *whole* of last week? Did the person look for work last week? (o) Apprentices shown separately. (p) Employer's occupation. (q) Also the institution at which obtained. (r) Under fourteen years.

**Particulars of Dwelling Obtained on Householder's Schedules^(a) Censuses
1911 to 1966**

(x Indicates information obtained for census concerned)

Question	Census						
	1911	1921	1933	1947	1954	1961	1966
Particulars obtained on 1966 census schedule							
Class of dwelling ^(b)	x	x	x	(c)x	x	x	x
Material of outer walls	x	(d)x	x	(d)x	x	x	x
Number of rooms ^(e)	x	x	x	x	x	x	x
Occupancy ^(f)	x	x	x	x	x	x	x
Weekly rent ^(g)	x	x	x	x	x	x	x
Facilities available:							
Gas .....	..	..	..	x	x	x	x
Electricity .....	..	..	..	x	x	x	x
Television set .....	..	..	..	..	..	x	x
Kitchen .....	..	..	..	..	(h)x	(h)x	(h)x
Bathroom .....	..	..	..	(h)x	(h)x	(h)x	(h)x
Date of building .....	..	..	..	(i)x	(j)x	(j)x	(j)x
Farm dwellings:							
On rural holding of one acre or more ..	..	..	..	..	x	x	x
Distance from post office (miles) .....	..	..	..	..	..	x	x
Size of rural holding .....	..	..	..	..	..	x	x
Motor vehicles at dwelling .....	..	..	..	..	..	..	x

Particulars not obtained in 1966 but obtained at a previous census

Sleeping out—Number of persons who sleep out throughout the year on verandahs (not enclosed sleep-outs) .....	..	..	x	x	..	..	..
Number of persons usually resident on the premises .....	..	x	..	..	..	..	..
Facilities available:							
Water supply—Running water (do not include rain water tanks) .....	..	..	..	x	..	..	..
Flush toilet .....	..	..	..	(h)x	..	..	..
Laundry .....	..	..	..	(h)x	..	..	..
Cooking:							
Whether installed .....	..	..	..	(h)x	..	..	..
Means of cooking mostly used .....	..	..	..	x	..	..	..

(a) The exact wording of questions has not remained constant from census to census. (b) Private house, flat, tenement, hotel, boarding house, institution, etc. (c) From 1947 includes 'Shared house', etc.—the householder to answer questions only for that part of the house occupied by him. (d) Also roof. (e) Includes kitchen, and from 1933 permanently enclosed sleep-out, but excludes bathroom, pantry, laundry, etc. (f) Owner, tenant, etc., and from 1954, where rented from a government authority. (g) Unfurnished or estimated unfurnished rental value. From 1947, furnished and unfurnished rentals were shown separately. (h) If shared, to be indicated. (i) Before 30 June 1933, or not. (j) Prior to preceding census and by years for intervening period.

Conduct of the census

The arrangements made for the taking of a census of the Commonwealth resolve broadly into the following phases which, although apparently distinct, are in fact closely interrelated parts of a highly integrated system; determining the questionnaire and the form of the householder's schedule and personal slip and accompanying legislation and instructions; schematic arrangement of census divisions and census subdivisions and collector's districts; mapping; selection, organisation and instruction of field staff; supply and transmission throughout

Australia of census materials; publicity; distribution and collection of householder's schedules and personal slips by census collectors; establishment of processing and tabulating centres, the return and processing of completed census material, and the origination of punched cards; tabulation and summarisation; presentation, analysis and interpretation of results.

During the period between censuses experienced census staff are engaged in the research, development and planning of all aspects of the census. Of prime importance is the content of the householder's schedule and the statistical tabulations which it is desired to obtain in order to meet the needs of users in government, business and research. In conformity with these aims, field procedures and instructions, processing instructions, training methods, publicity, and staffing standards are developed. As far as possible, field pre-tests are conducted prior to the census to check the adequacy of proposed methods and procedures.

Some years before the taking of the census, the preparation of field maps is commenced. Other preparations follow as the census day approaches, involving the printing and distribution of forms, instructions and code lists; recruitment, training and equipment of field staff; the establishment of a processing centre; and the selection and training of processing staff. The success of the enumeration depends in large measure on the quality and training of staff and the development of effective supervision and control.

The operations outlined in the following paragraphs relate to the most recent census procedures.

Field organisation

For the organisation and administration of census activities the States are divided into census divisions. Each internal Territory is also one division. Each division comprises a number of census subdivisions, further divided into collector's districts.

In the delineation of collector's district boundaries, the following criteria are relevant.

- (1) The area enclosed must not exceed the workload of one collector at the census period.
- (2) They must accommodate all State, Territorial and administrative boundaries.
- (3) Boundaries should be visible and easily followed by the collector.
- (4) They should preserve comparability with previous censuses.
- (5) They should conform to criteria currently in use in connection with the delimitation of urban boundaries.

For the census of 1921 and each subsequent census the organisation of the Commonwealth Electoral Office has been used as the basis of the census field organisation. The Chief Field Supervisor is appointed from the staff of the Census Division of the Commonwealth Bureau of Census and Statistics, but the Assistant Chief Field Supervisor and other senior supervisory field staff are appointed under the Census Regulations, in general from the staff of the Commonwealth Electoral Office.

Census divisions correspond closely with Commonwealth electoral divisions and each census division is controlled by an enumerator. Enumerators in each State are responsible to the Deputy Field Supervisor who is in charge of field operations in the particular State or Territory. Reporting to the enumerators are sub-enumerators, who are selected from a broad range of responsible public officials and private individuals, some four-fifths of whom were connected (at the 1966 Census) in some temporary or permanent way with the Electoral Office function.

The recruitment of census collectors is carried out by enumerators, often with the advice of sub-enumerators and in accordance with standards determined by the Bureau. Each collector enters into a contract of service and signs an undertaking of fidelity and secrecy. Special collectors for shipping, light-houses, certain public institutions, long-distance trains, coaches, and aircraft are also appointed.

The majority of persons connected with the field work of the census are employed temporarily and for very short periods, and, because of the long interval between censuses, many of them are without experience or knowledge of the work. It is necessary, therefore, that provision be made to enable census field staff to become acquainted with the objects and methods of the census. The basis of the instruction programme is a series of printed booklets, each containing instructions and general information for a particular level of the field staff, from collector to field supervisor. These booklets set out in detail the duties of the respective positions and contain instructions providing guidance for circumstances likely to arise. They may be supplemented by additional instructions for special circumstances, etc. Pre-census conferences at various levels are an established part of the preparations for the census. At these conferences the proposed householder's schedule and personal slip, the instructional booklets, administrative forms and all arrangements are discussed. Additionally, in 1966, an extensive collector training scheme was conducted using an instructional filmstrip. Post-census conferences are also held, and reports are made by various members of the field staff. From these emanate constructive and useful suggestions which are used in future census planning.

Mapping

After approval of the scheme of sub-division the next most important phase in the organisation of the Census is the preparation of the maps required for the field staff and central office control. Basic material for the census maps, together with aerial photographs where required for special reference and guidance, are obtained from the relevant State and semi-governmental authorities and private map publishers. Difficulty has always been experienced in obtaining suitable base maps for this work, especially in rural areas, and difficulties are encountered in delineating boundaries on maps which have not been revised or re-drawn for many years.

The overall mapping programme comprises production of (a) a map of census divisions for Australia as a whole; (b) a diagram map for each census division showing sub-division boundaries and local government area boundaries; (c) a detailed base map for each census subdivision showing boundaries of local government areas and collector's districts; and (d) a map of each collector's district which, together with a typed description of the boundary, is inserted in the collector's record book for reference by the collector in the conduct of his work.

In addition to the maps for the organisation and the taking of the census, drawings and associated masks required for printing the coloured maps used in connection with the presentation of tabulated data in census publications are also prepared.

Census material

The estimated number of householder's schedules and personal slips required for each census subdivision is based on the numbers of dwellings as estimated by the enumerators. An additional proportional allowance is incorporated as a safeguard against contingencies.

The quantities of other material required (e.g. instruction booklets, record books, compilation books, administrative forms and equipment of various kinds)

are also estimated by enumerators. Being closely related to known numbers of census divisions, subdivisions, or collector's districts, requirements can be assessed fairly accurately.

The printing and dispatch to the appropriate centres of householder's schedules, personal slips and envelopes for use with personal slips are organised and controlled by the Commonwealth Government Printer, Canberra. Other material, such as collectors' record books, collectors' compilation books, instruction booklets, administrative forms, posters, classifications and indexes of occupations and industries, labels, and tabulation forms, is printed by the Commonwealth Government Printer. Documents such as code lists and instructions for coding and checking are prepared on the Bureau's own reproduction equipment. Dispatch of this material is in general undertaken by the Census Office, Canberra.

Collector's duties

The census collector's duties are confined principally to distributing householder's schedules (and personal slips if required) to all dwellings in his district before census day and collecting completed forms after census day. Each collector is supplied with a collector's record book (which contains a map of his district and a description of its boundary) for door-to-door use and a collector's compilation book for purposes of compiling early field count figures. When collecting householder's schedules and personal slips the collector is expected to account for all forms issued and to examine them to ensure completeness. It is also the collector's duty to help those who for any reason were unable personally to fill in the schedule or slip. On satisfying himself as to completeness, the collector inserts in the appropriate place on each schedule the number of persons of each sex in the dwelling concerned. These details, together with other required details, are later transferred into the collector's compilation book. This book forms an integral part of the census records and is used as the basis for early field counts, for subsequent checking and balancing, and as a reference for other census purposes.

Each collector, upon completion of his duties, returns all material to his sub-enumerator. After checking the completed forms, record book and compilation book for each collector's district in his subdivision in accordance with standard instructions designed to ensure accuracy and completeness of coverage, the sub-enumerator forwards them to his enumerator, who is responsible for checking that the material is complete for all collector's districts in his division before transmission to the processing centre.

Processing, tabulation and publication of Census results

For the purpose of processing the census schedules and other records for subsequent tabulation a census processing centre is established. To this is returned all the material from the field organisation after collection and checking. In the processing centre the completed schedules and slips are checked against collectors' records and then bound into book form to preserve their arrangement and to facilitate reference, handling and storage. From the bound books of schedules and slips, coding and the preparation of material for tabulating processes are carried out.

Tabulation of census data by means of punched card machines was first used at the 1921 census, and from that time there has been continuous technical improvement in the design, performance and range of application of the various types of equipment used at successive censuses. At the 1966 census, for the first time, computer equipment was used for an Australian census. A basic requirement for tabulation purposes is that the replies given to the questions on the census schedule should be subsequently converted into numerical form. For the 1966 census, as in previous censuses, code lists were prepared to enable replies

not already given in numerical form to be so converted. The code list for each characteristic (personal or dwelling) is, in essence, a predetermined optimum arrangement of how the replies in relation to that characteristic can be tabulated for presentation in the census publications. Each category in a code list is numbered. Where necessary, a code list is supplemented (for coding purposes) by an index showing the code number to be used for each anticipated possible answer to the particular census question.

The scheme of publication adopted for the census is designed to provide for the earliest possible publication of results progressively as they become available. Preliminary and summarised results are published in mimeographed form; the detailed final results are published in a series of volumes, each comprising a number of parts.

Census Regulations provide for the division of each State and Territory of the Commonwealth into census divisions, census sub-divisions and collector's districts for the purpose of 'the taking and the collection of the Census'. Neither the Act nor the Regulations specify the extent to which data obtained at the census are to be geographically dissected for presentation, but in all censuses the need to produce detailed statistics for local areas has been recognised. Census information is being published for the following categories for the 1966 census:

- (i) local government areas;
- (ii) metropolitan urban, other urban, rural, and migratory divisions of each State and Territory and of Australia as a whole;
- (iii) statistical divisions, as used for many years in State statistical publications, and statistical districts, introduced for the first time in 1966 and representing stable regional boundaries of large towns with a regional population of over 100,000;
- (iv) urban centres, defined under new criteria for the 1966 Census;
- (v) rural localities in which twenty or more dwellings or fifty or more persons were enumerated.

Detailed results of the censuses of the External Territories are published in a manner similar to those of the States and Internal Territories.

5.2 POPULATION GROWTH AND DISTRIBUTION

The population of South Australia had reached 17,366 persons at the first Census on 26 February 1844. In 1861, twenty-five years after the first settlers arrived, the population was 126,830 and this figure had more than doubled by the Census in 1881. By 1921 the population was almost 500,000 persons and it is estimated to have reached 1,000,000 persons in January 1963. The population enumerated at the Census, 30 June 1966 was 1,091,875 persons excluding full-blood Aborigines. (A full-blood Aboriginal is defined as a person who describes himself as having more than 50 per cent Aboriginal blood).

Following the repeal in August 1967 of Section 127 of the Commonwealth Constitution, official figures of population include full-blood Aborigines from 1966.

Reporting at the 1966 Census was insufficiently precise to enable a reliable dissection of full-blood and half-blood Aborigines to be made and consequently the difference between inclusive figures and exclusive figures of full-blood Aborigines (published elsewhere) should not be taken as a reliable measure of the Aboriginal population. The 1966 Census figures including full-blood Aborigines have been published for comparison with subsequent population figures only.

Population, South Australia, Censuses 1844 to 1966

Census Date	Population			Increase since Previous Census		
	Males	Females	Persons	Males	Females	Persons
1844 26 February ..	9,686	7,680	17,366	..	..	..
1846 26 February ..	12,670	9,720	22,390	2,984	2,040	5,024
1851 1 January ..	35,302	28,398	63,700	22,632	18,678	41,310
1855 31 March	43,720	42,101	85,821	8,418	13,703	22,121
1861 8 April	65,048	61,782	126,830	21,328	19,681	41,009
1866 26 March	85,334	78,118	163,452	20,286	16,336	36,622
1871 2 April	95,236	90,189	185,425	9,902	12,071	21,973
1876 26 March	109,841	102,687	212,528	14,605	12,498	27,103
1881 3 April	145,113	130,231	275,344	35,272	27,544	62,816
1891 5 April	161,920	153,292	315,212	16,807	23,061	39,868
1901 31 March	180,485	177,861	358,346	18,565	24,569	43,134
1911 3 April	207,358	201,200	408,558	26,873	23,339	50,212
1921 4 April	248,267	246,893	495,160	40,909	45,693	86,602
1933 30 June	290,962	289,987	580,949	42,695	43,094	85,789
1947 30 June	320,031	326,042	646,073	29,069	36,055	65,124
1954 30 June	403,903	393,191	797,094	83,872	67,149	151,021
1961 30 June	490,225	479,115	969,340	86,322	85,924	172,246
1966 30 June	548,530	543,345	1,091,875	58,305	64,230	122,535

In the next table, increases in the population have been classified as *recorded natural increase* (the excess of recorded births over recorded deaths) and *other increase* (which consists mainly of the excess of arrivals over departures, either from overseas or interstate). Annual average increases which are given for each ten-year period since 1861 and for the seven-year period 1961-67 show some important aspects of the development of the State, viz:

The net migration, especially of males, away from South Australia following the mineral discoveries in other States in the 1880s and early 1890s.

The slow growth during the economic depression of the 1930s when natural increase fell to a particularly low level.

The high rate of migration in the post 1939-45 War period up to 1960.

Increases in the Population, South Australia

Period	Recorded Natural Increase			Other Increase			Total Increase		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Annual Average									
1861-1870	2,052	2,121	4,173	1,003	720	1,723	3,055	2,841	5,896
1871-1880	2,366	2,555	4,921	2,889	1,375	4,264	5,255	3,930	9,185
1881-1890	3,349	3,535	6,884	(-)1,488	(-)1,141	(-)2,629	1,861	2,394	4,255
1891-1900	2,832	3,024	5,856	(-) 973	(-) 567	(-)1,540	1,859	2,457	4,316
1901-1910	2,665	2,745	5,410	(-) 44	(-) 404	(-) 448	2,621	2,341	4,962
1911-1920	3,508	3,614	7,122	366	926	1,292	3,874	4,540	8,414
1921-1930	3,131	3,300	6,431	1,201	714	1,915	4,332	4,014	8,346
1931-1940	(a)1,787	(a)1,929	(a)3,716	(-) 860	(-) 397	(-)1,257	927	1,532	2,459
1941-1950	(a)3,977	(a)4,026	(a)8,003	2,705	1,671	4,376	6,682	5,697	12,379
1951-1960	5,631	5,923	11,554	6,279	5,585	11,864	11,910	11,508	23,418
1961-1967 (b) ...	6,043	6,421	12,464	4,873	5,298	10,171	10,916	11,719	22,635

(a) Deaths of defence personnel (except those registered on civil registers during 1940 and 1941) not deducted in calculating natural increase.

(b) Seven-year period. Recorded natural increase includes full-blood Aborigines after 1966. Other increase and total figures include full-blood Aborigines after 1965. All figures prior to 1966 exclude full-blood Aborigines.

The rate of growth of the population, *i.e.* the increase during the period expressed as a percentage of the population at the beginning of the period, fluctuated widely prior to 1921 then settled at about 2 per cent per annum. From 1928 to 1940 the rate was less than one per cent but since 1947 it has been above 2 per cent in almost every year and it exceeded 3 per cent per annum in the mid-1950s.

The State's rate of growth was slower than the Australian rate in every decade from 1881-90 to 1931-40, but subsequently the steep rise in the rate of net migration has enabled an above-average growth rate to be achieved.

Rate of Increase of Population^(a), South Australia and Australia

Period	South Australia			Australia		
	Recorded Natural Increase	Other Increase	Total Increase	Recorded Natural Increase	Other Increase	Total Increase
Annual Average						
1861-1870 ..	26.46	10.92	37.38	24.31	12.06	36.37
1871-1880 ..	22.34	19.36	41.70	20.45	10.01	30.46
1881-1890 ..	22.67	(—) 8.66	14.01	19.96	14.23	34.19
1891-1900 ..	16.90	(—) 4.44	12.46	16.91	0.71	17.62
1901-1910 ..	14.70	(—) 1.22	13.48	15.29	1.00	16.29
1911-1920 ..	15.99	2.90	18.89	15.77	4.20	19.97
1921-1930 ..	11.87	3.53	15.40	12.97	5.23	18.20
1931-1940 ..	(b) 6.33	(—) 2.14	4.19	(b) 7.92	0.60	8.52
1941-1950 ..	(b) 12.50	6.83	19.33	(b) 12.04	4.34	16.38
1951-1960 ..	13.81	14.18	27.99	13.71	8.73	22.44
1961-1967(c).	12.01	9.80	21.81	11.91	7.18	19.00

(a) Rate per 1,000 of mean population. (b) See note (a) to previous table. (c) See note (b) to previous table.

Estimates of the population of the State for the last seven years are given in the following table. The total increase for each year and the rate of growth are also shown.

Estimated^(a) Population, South Australia

At 31 December

Year	Males	Females	Persons	Total Increase for Year	Rate of Growth %
1961.....	493,356	483,765	977,121	..	..
1962.....	501,920	493,910	995,830	18,709	1.91
1963.....	513,255	506,535	1,019,790	23,960	2.41
1964.....	527,594	521,557	1,049,151	29,361	2.88
1965.....	542,635	537,312	1,079,947	30,796	2.94
1966.....	554,810	549,780	1,104,590	21,534	1.99
1967.....	561,833	556,644	1,118,477	13,887	1.26

(a) Figures subsequent to June 1966 include full-blood Aboriginals; earlier figures exclude full-blood Aboriginals.

Estimates of population from June 1961 (Census), onwards have been derived by a new method of estimation. The population of the State is now estimated by adding to the population ascertained at the Census the recorded natural increase and the allocation of the net gain to Australia by overseas migration for the State; gains and corresponding losses that result from movement between South Australia and other States are also taken into account, in so far as they are

recorded as transfers of residence under child endowment procedures or Commonwealth electoral procedures, supplemented by results of any special count or sample survey. These estimates have been revised according to final results of the Census, 30 June 1966. The previous method of estimation was based on the addition to census population, figures of natural increase and all net recorded movement from overseas according to embarkation/disembarkation in this State as well as all net recorded movement by air, rail, sea and bus between this and other States.

These estimates show that an annual increase in population of over 20,000 persons was maintained during the period 1963 to 1965, but it fell significantly below this level in 1967. The rate of growth increased from 1.9 per cent per annum in 1962 to nearly 3 per cent per annum in 1965, but it fell sharply to 1.3 per cent per annum in 1967.

The estimated mean population for South Australia is calculated for the years ended 30 June and 31 December. Estimates for the last ten years are shown in the next table.

Estimated Mean Population, South Australia

Year	Year Ended 30 June (a)			Year Ended 31 December (a)		
	Males	Females	Persons	Males	Females	Persons
1958....	448,723	437,298	886,021	453,681	443,306	896,987
1959....	458,876	449,478	908,354	465,119	455,987	921,106
1960....	471,548	462,071	933,619	477,432	467,429	944,861
1961....	484,055	473,081	957,136	490,502	479,616	970,118
1962....	493,390	483,620	977,010	497,147	488,400	985,547
1963....	502,101	493,997	996,098	507,766	500,228	1,007,994
1964....	513,918	506,932	1,020,850	520,708	514,099	1,034,807
1965....	527,790	521,517	1,049,307	534,978	529,004	1,063,982
1966....	542,265	536,590	1,078,855	(b) 550,058	(b) 544,509	(b) 1,094,567
1967....	(b) 554,691	(b) 549,282	(b) 1,103,973	(b) 558,557	(b) 553,118	(b) 1,111,675

(a) Mean population figures for periods prior to 30 June 1966 are based on estimates exclusive of full-blood Aborigines.

(b) Including full-blood Aborigines.

EARLY HISTORY OF SETTLEMENT

The census of the population of the colony of South Australia in 1844 revealed that over 10,000 of the total population of 17,366 persons were located in or near Adelaide. In 1846 there was a total population of 22,390 persons and approximately 13,000 of these were located in or near Adelaide. Most of the population outside the Adelaide area had settled to the north as far as Port Wakefield, including a settlement at Gawler Town, and to the south to Encounter Bay. By 1846 over 500 persons had settled further south in an area near Rivoli Bay. Population at Port Lincoln in 1844 was 96 persons and increased to 132 persons in 1846. Kangaroo Island had a population of 70 persons in 1846.

The division of some portions of South Australia into counties was made in 1842 and the census in 1851 was recorded on that basis. Nearly all of the counties at that time were in the present Central Division; exceptions were Counties Stanley (Lower North), Russell (Murray Mallee), Robe (South Eastern) and Flinders (Western).

Most of the population in 'other areas' was in the Burra mining towns of Koorunga, Redruth and Aberdeen and in the vicinity of Burra Creek.

The discovery of copper near Kapunda (County Light) in 1843 and near Burra in 1845 was one of the first causes of a sudden movement of people to new areas. The construction of the railway to Kapunda also helped to open up the land in the Lower North for agriculture.

In 1861 the main country centres of population included Mount Gambier and Port Lincoln, both of which served as agricultural and commercial centres for their respective regions; Kapunda, Burra and Wallaroo, important copper mining centres; Gawler, a manufacturing and distributing centre at the entrance to the rich Barossa Valley; Goolwa, Port Elliot, Robe, Port Augusta and Port Wakefield, small ports; and Strathalbyn and Mount Barker, agricultural centres.

**Population, South Australia
Census 1851**

County, District, Etc.	Number of Persons
City of Adelaide	14,577
County Adelaide	29,447
County Hindmarsh	3,121
County Sturt	1,833
County Eyre	361
County Gawler	1,011
County Light	4,396
County Stanley	1,283
County Russell	174
County Robe	1,209
County Flinders	520
Kangaroo Island	87
Yorke Peninsula	122
Other areas	5,559
Total	63,700

The concentration of people in the Adelaide area led to the need for various community services. Water was laid on in 1861 and gas in 1863. Thus began the introduction of factors which assisted in an increasing concentration of the population in and around Adelaide; there were increased comforts and amenities as well as greater opportunities for employment.

At this time the two peninsulas and the northern districts had not been exploited and there were very few settlers in the Murray Valley, the Murray Mallee or on Kangaroo Island. Apart from the pull of the mineral fields the chief population movement was towards the South East and along the rich alluvial inter-ridge plains of the Lower North.

Subsequently the movement of settlers into Eyre Peninsula caused the population to rise from 2,600 persons in 1881 to over 6,000 in 1901 and more than 13,000 by 1911.

In the Murray Mallee, farm settlement similar to that in Eyre Peninsula, together with irrigation settlements at Renmark and other areas in the 1880s and 1890s increased the population to 4,700 persons by 1901 and over 13,000 by 1911. Further settlement, including schemes for settlement of ex-servicemen on irrigation areas, resulted in a population of approximately 23,700 persons by 1921.

The pattern of settlement in South Australia from 1861 had been changed by the opening of the northern wheat lands, the drainage of the South Eastern swamps, the increase in the number of farmers in both Yorke and Eyre Peninsulas and in the Murray Mallee, and the development of irrigation in the Murray Valley, especially in the Renmark-Berri area and along the Lower Murray flats. Port Lincoln and Mount Gambier had increased their importance as distributing centres and Port Pirie, Iron Knob and Whyalla had developed as mining and industrial centres. With improved roads and expansion of railway facilities people were able to move about more rapidly. Settlement had become concentrated more into cities and larger towns. By the 1933 Census the population of South Australia had reached 580,949 persons and of these 312,619 were living in the metropolitan area as defined at that date. Port Pirie with a population of 11,680 persons had the highest population of any town outside the metropolitan area; Mount Gambier had 5,539 and Gawler 4,138 persons.

DISTRIBUTION OF POPULATION

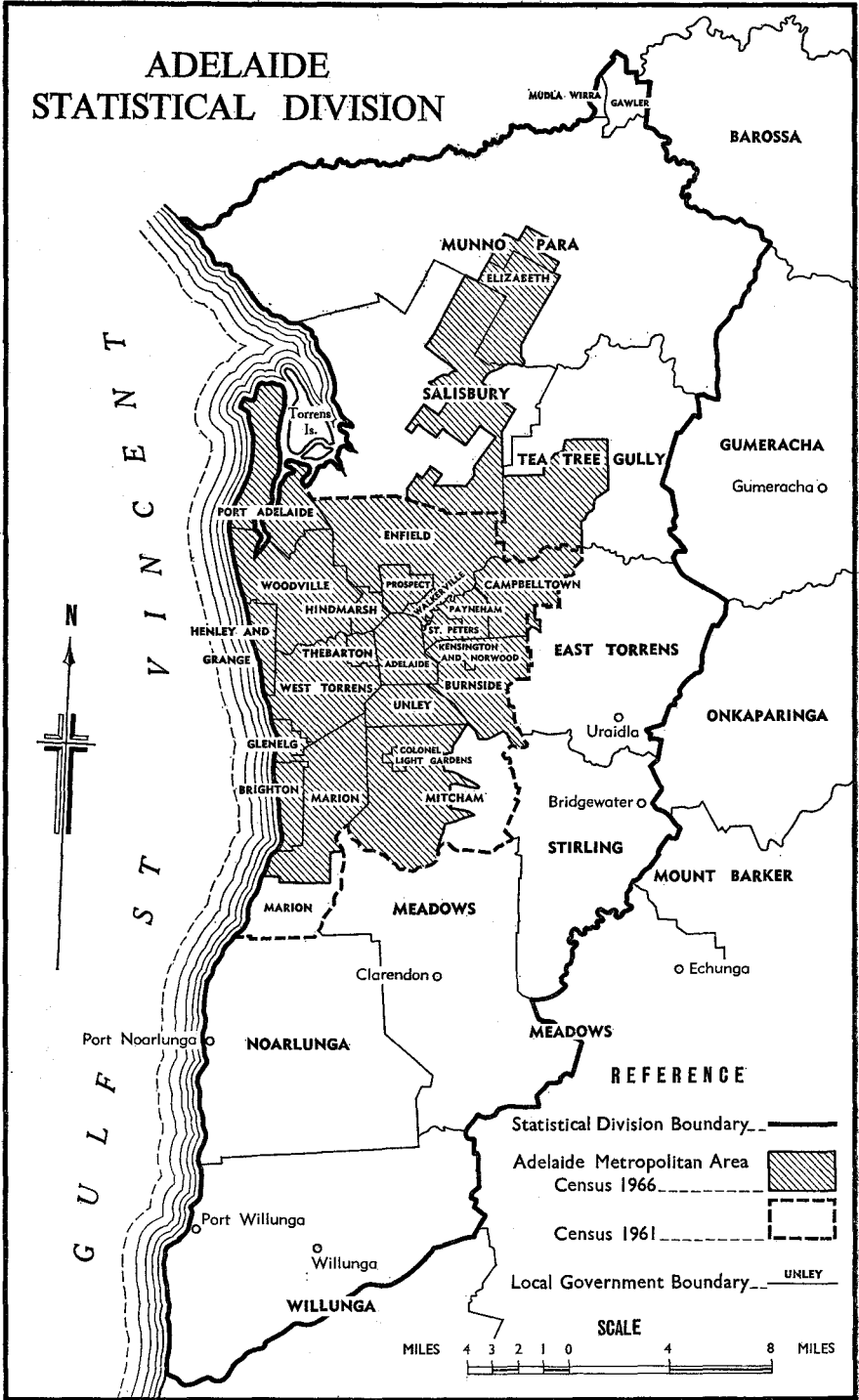
The population of South Australia exclusive of full-blood Aboriginals numbered 1,091,875 persons at the Census, 30 June 1966. A large proportion of this total was located in and near the capital city of Adelaide; 727,916 (66.7 per cent) were in the Adelaide Metropolitan Area; 771,175 (70.6 per cent) in the Adelaide Statistical Division (see map page 92). At the 1954 Census 67 per cent of the population was located within a twenty-five mile radius of the City of Adelaide, and by the 1961 Census had increased to almost 70 per cent. A large proportion (47 per cent) of the remainder outside the Adelaide Statistical Division at the 1966 Census lived in urban areas scattered through the southern portion of the State, while small numbers lived on rural properties, in mining centres, forest reserves, small fishing ports and in construction and maintenance camps in rural areas.

Urban Areas

For the purpose of presenting population and dwelling statistics new methods have been adopted in the delimitation of metropolitan and certain other urban centres. These methods were first used for the Census, June 1966, and will apply uniformly throughout Australia.

The basic criterion used is *population density*. The geographic units to be classified according to the density criterion are collector's districts, the smallest units available. These areas vary in size and shape, but as far as possible they have been designed to ensure that significant urban development in large rural collector's districts is split off as a separate collector's district. Particular rules apply to contiguous areas with special functions, such as airports, sporting areas and industrial areas, which do not meet the density criterion. Where there is a gap in urban development which is less than two miles (by the shortest rail or road distance) between the edge of one area of urban development and another, the gap is ignored and the urban areas treated as contiguous; if there is a gap of two or more miles between the two urban areas, those urban areas are treated as separate urban areas even if the gap comprises mainly reserved land or a natural barrier.

Because of practical difficulties (notably lack of time to carry out an extensive examination of each area in order to re-design suitable collector's districts, and the absence of suitable topographic boundaries around small towns) the new criteria at present have not been applied to extra-metropolitan urban centres in South Australia; instead, the following procedures were used.



MAP 7

Municipalities, cities and towns of over 1,000 population have been classified as urban, except where they contain a very large rural component, in which case the urban centres have been delimited from aerial photographs or by field inspection, *e.g.* Renmark Municipality. Where extensive urban development is known to extend beyond the boundary the extension has been regarded as an integral part of the urban centre and is included, *e.g.* City of Port Pirie. Other urban centres have been extensively examined on the most recent aerial photographs available and the boundaries set as closely as possible to the periphery of the built-up area without regard to local government boundaries.

In addition, holiday areas are defined as urban if they have 250 or more dwellings (at least 100 of which are occupied on Census night) and the settlement has a recognisable core (as opposed to a straggle of houses along a coastline, for example). The population of such an area is usually at a minimum on Census night because the Census is taken in mid-week and during the winter.

The boundary of an urban centre is, therefore, the peripheral boundary of an aggregate of contiguous urban collector's districts, the densities of which are at least 500 persons per square mile. The boundary is a moving one which reflects the process of urbanisation. The use of objective criteria will enable valid comparisons to be made between one urban centre and another, and between the population for an urban centre at one Census with the populations at succeeding Censuses.

Around Adelaide (and all other capital cities in Australia), two boundaries have been defined. The outer one, which is fixed, circumscribes the area in close economic and social contact with the main city, and which contains the anticipated urban development of the city for a period of at least twenty to thirty years. This boundary defines the Adelaide Statistical Division (see map, page 92). The inner boundary indicates the area which, at the time of the Census, meets the criteria for urban areas described above. From Census to Census, as urbanisation proceeds, this boundary will move outwards to encompass peripheral development. This boundary defines the Adelaide Metropolitan Area which currently contains nearly all the metropolitan area as defined at the 1961 Census, and in addition, includes the City of Elizabeth and large portions of the cities of Salisbury and Tea Tree Gully, and small parts of Munno Para and East Torrens District Councils (see map, page 92).

In future the boundaries of all population clusters of 1,000 or more persons, having a minimum density of 500 persons per square mile, will be delimited using the above density criteria.

In 1921 the rural population was 195,054 and at that time represented 39.4 per cent of the total population (42.1 per cent of males and 36.7 per cent of females). There were 214,762 persons classified as living in rural areas at the 1933 Census but the total had fallen slightly to 200,065 in 1961, and the proportion of the total population was down to 20.6 per cent (21.7 per cent of males and 19.6 per cent of females). A further fall occurred during 1961-66. According to final census figures, the total rural population (exclusive of full-blood Aborigines) was 188,591 persons at 30 June 1966, and the proportion of the total population had fallen further to 17.3 per cent (18.2 per cent of males and 16.3 per cent of females). In fact the proportion of the population living in rural areas has shown a steady decrease over the period since 1921.

Urban and Rural Population, South Australia

Censuses 1921 to 1966

(Excludes Full-Blood Aboriginals)

Census	Urban				Rural		Total (including Migratory)	
	Metropolitan (a)		Other (b)		Number	Per Cent	Number	Per Cent
	Number	Per Cent	Number	Per Cent				
1921.....	255,375	51.57	41,637	8.41	195,054	39.39	495,160	100.00
1933.....	312,619	53.81	51,456	8.86	214,762	36.97	580,949	100.00
1947.....	382,454	59.20	65,911	10.20	196,007	30.34	646,073	100.00
1954.....	483,508	60.66	110,107	13.82	201,133	25.23	797,094	100.00
1961.....	587,957	60.66	177,380	18.30	200,065	20.64	969,340	100.00
1966.....	(a)727,916	66.67	173,794	15.92	188,591	17.27	1,091,875	100.00

(a) Prior to 30 June 1966 the Metropolitan Area of Adelaide comprised twenty-one municipalities. From 30 June 1966 new criteria, based mainly on population density have been adopted for all capital cities; the boundary for Adelaide has been extended to embrace new areas including Elizabeth, Salisbury and Tea Tree Gully.

(b) 'Other urban' up to the 1947 Census comprised all municipalities outside the Metropolitan Area. For the 1954 and 1961 Censuses non-municipal towns of 1,000 or more persons were also included, but in 1961 and 1966 municipalities of less than 1,000 persons were excluded. In 1966, four centres viz Goolwa, Port Elliot, Port Broughton and Port MacDonnell, although having a population of less than 1,000, were regarded as urban on a dwelling density basis.

For statistical purposes the settled southern portion of the State is divided into seven statistical divisions, as shown on the map inside the back cover of this volume. The population of each division at the last four censuses is shown in the following table. The figures for Adelaide and Central have been combined for 1947, 1954 and 1961 because the concept of the Adelaide Statistical Division was first introduced at the 1966 Census.

Population of Statistical Divisions, South Australia

Censuses 1947 to 1966

(Excludes Full-Blood Aboriginals)

Statistical Division	Population at 30 June				Proportion of State Population			
	1947	1954	1961	1966	1947	1954	1961	1966
					Per Cent			
Adelaide	475,942	591,520	734,446	771 175	73.67	74.21	75.77	70.63
Central				74,112				
Lower North	45,688	50,009	49,898	48,201	7.07	6.27	5.15	4.41
Upper North	18,390	20,946	22,944	22,632	2.85	2.63	2.37	2.37
South Eastern	31,556	42,614	52,241	55,567	4.89	5.35	5.39	5.09
Western	29,174	34,043	42,394	52,585	4.51	4.27	4.37	4.82
Murray Mallee	39,058	47,168	52,048	55,210	6.04	5.92	5.37	5.06
Remainder of State	4,564	8,448	11,431	10,820	0.71	1.06	1.18	0.99
Migratory	1,701	2,346	3,938	1,573	0.26	0.29	0.40	0.14
Total	646,073	797,094	969,340	1,091,875	100.00	100.00	100.00	100.00

Over 80 per cent of the increase in the State's population between 1947 and 1966 has occurred in Adelaide and Central Divisions, and the population of these divisions has increased from 73.7 per cent in 1947 to 77.4 per cent in 1966. Some gain in population was recorded in all Statistical Divisions during this period, but there has been a marked fall in the proportion of the population in Lower North, Upper North and Murray Mallee Divisions. Population in the north of the State is very scattered; the area outside the seven statistical divisions, which covers 78.7 per cent of the total area of the State, contained only 10,820

persons (about one per cent of the population) at the 1966 Census. Approximately two-thirds of these persons were in either the Weapons Research Establishment area of Woomera-Maralinga, or the three mining towns of Leigh Creek, Andamooka and Coober Pedy.

Population in and near Adelaide

The Adelaide Metropolitan Area comprises twenty complete local government areas and part of each of six others. Of these, seventeen have been proclaimed as cities, the latest being Tea Tree Gully which was officially declared a city on 8 February 1968. Qualification for city status within the metropolitan area is dependent on the population reaching 15,000 persons, but a subsequent fall in population below this level (as has occurred in the City of Kensington and Norwood) does not involve loss of city status.

Population, Adelaide Metropolitan Area

(Excludes Full-Blood Aborigines)

Local Government Area	Census 30 June 1961 (a)	Census 30 June 1966
Adelaide (C.)	23,051	18,577
Brighton (C.)	20,337	22,620
Burnside (C.)	36,153	38,758
Campbelltown (C.)	19,643	32,083
Colonel Light Gardens (M.)	3,671	3,404
East Torrens (D.C.) (Part)	(b)	573
Elizabeth (C.)	(b)	32,949
Enfield (C.)	72,028	80,261
Glenelg (M.)	14,492	14,762
Henley and Grange (M.)	11,680	14,146
Hindmarsh (M.)	12,914	11,352
Kensington and Norwood (C.)	13,476	11,928
Marion (C.) (Part)	56,694	66,754
Mitcham (C.) (Part)	38,696	49,299
Munno Para (D.C.) (Part)	(b)	10,284
Payneham (C.)	14,930	16,844
Port Adelaide (C.)	38,923	39,823
Prospect (C.)	22,184	21,411
St Peters (M.)	11,727	11,334
Salisbury (C.) (Part)	(b)	33,912
Tea Tree Gully (D.C.) (Part)	502	20,126
Thebarton (M.)	12,884	12,296
Unley (C.)	40,280	39,727
Walkerville (M.)	4,464	4,593
West Torrens (C.)	40,681	46,222
Woodville (C.)	71,039	73,878
Metropolitan Area	580,449	727,916

NOTE: Parts of Burnside, Campbelltown and Enfield were rural in 1961.

(C.)—City; (M.)—Municipality; (D.C.)—District Council.

(a) These figures represent approximately the population that would have been recorded as Metropolitan if the new criteria had been in force at the 1961 Census.

(b) Non-metropolitan in 1961.

Over the last two decades there has been a considerable fall in the population of the City of Adelaide, and lesser falls in all of the older municipalities close to the city, viz Prospect, Hindmarsh, Thebarton, Unley, Kensington and Norwood, St Peters and Walkerville. The greatest proportionate increases in

population have occurred in the local government areas of Munno Para, Salisbury, Elizabeth, Enfield (generally north of the city), Campbelltown and Tea Tree Gully (north-east), Marion and Brighton (south-west).

Although figures for the Metropolitan Area, defined according to the density criteria, are not available for the 1947 and 1954 Censuses, there appears to have been a continual increase in the proportion of the total population residing in the Metropolitan Area. This upward trend is shown in the preceding table for the 1961-1966 intercensal period. At the 1961 Census, the population of the Metropolitan Area defined according to the new density criteria is estimated to have been 580,449 persons, or 59.9 per cent of the total State population and this figure had increased to 727,916 (66.7 per cent) at the Census, 30 June 1966.

Significant growth has also occurred in the area adjacent to the Metropolitan Area within the Adelaide Statistical Division. The most rapid growth in this non-metropolitan part of the Adelaide Statistical Division during the 1961-66 intercensal period occurred in urban Reynella-Port Noarlunga (Noarlunga District Council) and in urban Crafers-Bridgewater (Stirling District Council).

Urban Reynella-Port Noarlunga increased from 2,429 persons in 1961 to 11,818 persons in 1966, an increase of 386.5 per cent (the largest percentage increase of any urban area outside the Metropolitan Area). Urban Crafers-Bridgewater increased from 4,048 persons in 1961 to 4,487 persons in 1966 (9.5 per cent increase).

The following table shows the population of the Adelaide Statistical Division at the 1961 and 1966 Censuses.

Population, Adelaide Statistical Division

(Excludes Full-Blood Aborigines)

Area	Census 30 June 1961 (a)	Census 30 June 1966
Metropolitan Area	580,449	727,916
Local Government Area:		
Burnside (C.) (Rural)	113	(b)
Campbelltown (C.) (Rural)	1,302	(b)
East Torrens (D.C.) (Rural)	3,664	3,240
Elizabeth (C.)	22,831	(b)
Enfield (C.) (Rural)	476	(b)
Gawler (M.)	5,639	5,703
Marion (C.) (Rural)	1,770	196
Meadows (D.C.) (Rural) (c)	2,242	2,824
Mitcham (C.) (Rural)	4,426	171
Mudla Wirra (D.C.) (c)	111	155
Munno Para (D.C.)	3,154	3,993
Noarlunga (D.C.)	5,492	14,198
Salisbury (C.)	12,884	1,850
Stirling (D.C.)	7,075	7,551
Tea Tree Gully (D.C.)	5,308	1,188
Willunga (D.C.) (c)	2,210	2,190
Total	659,146	771,175

NOTE: Generally, where a decrease in population is shown between 1961 and 1966, part of the relevant area has merged with the Metropolitan Area.

(C.)—City; (M.)—Municipality; (D.C.)—District Council.

(a) These figures represent approximately the population that would have been recorded if the new criteria had been in force at the 1961 Census.

(b) Merged with Metropolitan Area.

(c) Part of L.G.A. in Adelaide Statistical Division and part in Central Statistical Division.

Population Beyond the Adelaide Statistical Division

Whereas in each of the eastern States, New South Wales, Victoria and Queensland, there are at least four centres outside the capital city with a population of more than 20,000 persons, there is only one in South Australia. This city, Whyalla, had a population of 22,121 persons at the Census, 30 June 1966, making it the largest city outside the Metropolitan Area. Early expansion of Whyalla was a direct consequence of it being the closest port to the rich iron ore deposits at Iron Knob, Iron Baron and Iron Monarch. More recently, growth has been accelerated by the construction of a modern steel-making plant which began production in February 1965. The population of Whyalla at the Census, 1961 was 13,711 persons; in five years it has grown by 61.3 per cent.

At the 1966 Census there were only three other urban areas outside of the Adelaide Statistical Division, with population in excess of 10,000 persons. These were, Mount Gambier (17,251 persons), the centre of the rich and fertile south-eastern portion of the State, Port Pirie (15,566 persons), the most convenient port for shipping the rich silver-lead-zinc production of Broken Hill (N.S.W.), and Port Augusta (10,103 persons), the site of a large power station which uses Leigh Creek brown coal. Whyalla, Mount Gambier, Port Pirie and Port Augusta have all been proclaimed as cities, as the population of each is above 10,000, the qualifying level for extra-metropolitan towns.

Although there are no other towns of city size outside the Adelaide Statistical Division (Port Lincoln being the next largest with a population of 8,888 persons), there are a number of centres with population between 3,000 and 6,000 persons spread through the settled areas. Growth of these and other urban centres outside the Adelaide Statistical Division between 1961 and 1966 can be seen from the following table.

Population Growth of Urban Centres^(a), South Australia
(Excludes Full-Blood Aborigines)

Urban Centre	Census		Inter-Censal Increase Per Cent	Urban Centre	Census		Inter-Censal Increase Per Cent
	June 1961	June 1966			June 1961	June 1966	
Angaston	1,913	1,887	-1.36	Moonta	1,862	1,702	-2.15
Balaklava	1,301	1,199	-7.84	Mount Barker	1,872	1,934	3.31
Barmera	1,167	1,484	27.16	Mount Gambier	15,388	17,251	12.11
Berri	1,692	2,232	31.91	Murray Bridge	5,404	5,957	10.23
Bordertown	1,566	1,758	12.26	Naracoorte	4,410	4,378	-0.73
Burra	1,382	1,342	-2.89	Nuriootpa	1,841	2,041	10.86
Ceduna	1,280	1,406	9.84	Penola	1,375	1,383	0.58
Clare	1,622	1,579	-2.65	Peterborough	3,430	3,117	-9.13
Crystal Brook	1,208	1,235	2.24	Port Augusta	9,711	10,103	4.04
Gladstone	1,033	1,035	0.19	Port Broughton (b)	397	418	5.29
Goolwa (b)	509	561	10.22	Port Elliot (b)	563	565	0.36
Jamestown	1,304	1,282	-1.69	Port Lincoln	7,508	8,888	18.38
Kadina	3,102	3,022	-2.58	Port MacDonnell (b)	494	531	7.49
Kapunda	1,164	1,119	-3.87	Port Pirie	15,544	15,566	0.14
Keith	(c) 961	1,097	14.15	Renmark	2,854	3,054	7.01
Kingscote	(c) n.a.	1,071		Strathalbyn	1,465	1,449	-1.09
Kingston (S.E.)	(c) 939	1,065	13.42	Tallem Bend	2,049	1,947	-4.98
Leigh Creek	1,020	1,014	-0.59	Tanunda	1,863	1,986	6.60
Lobethal	1,085	1,098	1.20	Victor Harbor	2,816	3,128	8.39
Loxton	2,127	2,418	13.68	Wallaroo	2,237	2,094	-6.39
Maitland	(c) 989	1,017	2.83	Whyalla	13,711	22,121	61.34
Mannum	1,841	2,034	10.48	Woomera-Maralinga	4,808	4,745	-1.31
Millicent	3,401	4,533	33.28				

NOTE: Boundaries for 1961 have been redrawn according to the new criteria and the populations (partly estimated) are shown in this table for comparison with 1966 populations. The intercensal increase may therefore reflect (1) population changes within the original 1961 boundaries (2) urban growth beyond the original boundaries and (3) the merging of areas.

(a) Outside Adelaide Statistical Division.

(b) 'Holiday Area' classified as 'urban' on a dwelling density basis.

(c) Non-urban in 1961.

n.a.—Not available.

5.3 BIRTHS AND DEATHS

Compulsory registration of births and deaths was first provided in South Australia in 1842 when an Act 'for registering Births, Deaths and Marriages in the Province of South Australia' was passed. Current legislation is contained in the Births, Deaths and Marriages Registration Act, 1966 which came into operation on 1 January 1968 and the administration of the Act is the responsibility of the Principal Registrar of Births, Deaths and Marriages. For registration purposes the State is divided into twenty-two registration districts each of which has a registry office in the charge of a District Registrar.

The Principal Registrar maintains a register of all live births and of all deaths registered in the State and each District Registrar maintains in a register duplicate copies of the registrations of births and deaths which occurred in the district under his jurisdiction. Up to the end of 1967 separate registers were kept of still births, which were not included in the registrations or statistics of either live births or of deaths. Compulsory registration of still births was introduced in South Australia in 1937. The Act repealed by the current legislation defined a still born child as any which issued forth from its mother after the twenty-eighth week of pregnancy and which did not, at any time after being expelled from its mother, breathe or show any signs of life.

The current legislation does not require the Principal Registrar to maintain a register of still births, but it provides for a 'Medical Certificate of Cause of Perinatal Death' to be filled in and forwarded to the Principal Registrar by the attending medical practitioner in respect of a 'child not born alive', defined by the Act as a child whose heart has not beaten after its complete expulsion or extraction from its mother and who is either: (a) where the period of gestation is reliably ascertainable, a child of not less than twenty weeks gestation; or (b) in any other case, a child weighing not less than four hundred grammes at birth. The 'perinatal' certificates also are now being provided by attending medical practitioners for children dying within twenty-eight days after birth. These new provisions are part of Australia-wide arrangements which will enable a much more informed study of the reasons for perinatal mortality.

The birth of each live-born child is required to be registered by a parent within sixty days (previously forty-two days) of the date of birth. Registration of a live birth after the expiration of sixty days after the date of birth requires also the payment of a fee and a declaration in a form prescribed by the Act.

A death is required to be registered within fourteen days (previously ten) of the date of death by the occupier of the building or place in which the death occurred. Special provisions and penalties exist for the late registration of a death. A body may not be buried unless the undertaker is in possession of a 'Notice of signing of Medical Certificate of Cause of Death' signed by a medical practitioner or of an order by a coroner for burial, and the undertaker is required within seven days of the disposal of the body to notify the Principal Registrar of such disposal.

Births and deaths of Aborigines when registered are incorporated in registers, but to the end of 1966 have been excluded from statistics where there was definite indication that they were of full-blood. Statistics of births and deaths for 1967 include all registrations, inclusive of full-blood Aborigines.

In accordance with international practice, statistics for a period are on the basis of the births and deaths which were registered during that period. However, numbers registered in a period usually differ from the number of occurrences in the same period and, mainly because of the greater allowable period for registration, such variations generally are more apparent in birth than in death figures.

BIRTHS

In the following table, which shows the live birth rate, the masculinity of live births and the totals and rates of still births, a comparison between the births which actually occurred and those which were registered for the last ten years is also shown.

Live Births and Still Births, South Australia

Year	Total Live Births Occurred (a)	Births Registered							
		Live-born					Still-born		
		Total	Rate (b)	Males	Females	Masculinity (c)	Total	Rate (d)	
1958....	19,889	20,047	22.35	10,181	9,866	103.19	240	11.83	
1959....	20,868	20,372	22.12	10,325	10,047	102.77	281	13.61	
1960....	21,138	20,966	22.19	10,760	10,206	105.43	280	13.18	
1961....	21,366	22,399	23.09	11,402	10,997	103.68	272	12.00	
1962....	21,317	21,361	21.67	11,003	10,358	106.23	278	12.85	
1963....	21,080	21,367	21.20	11,006	10,361	106.23	262	12.11	
1964....	20,796	20,866	20.16	10,849	10,017	108.31	252	11.93	
1965....	20,745	20,891	19.63	10,778	10,113	106.58	256	12.11	
1966....	20,240	20,319	18.62	10,537	9,782	107.72	237	11.53	
1967....	20,300	20,386	18.34	10,402	9,984	104.19	211	10.24	

NOTE: Prior to 1967 excludes full-blood Aborigines.

(a) Figures are subject to the addition of a few very late registrations.

(b) Per 1,000 of mean population.

(c) Number of male births per 100 female births.

(d) Per 1,000 of all births (live and still).

The birth rate per thousand of the mean population was above 45 in the late 1850s then declined generally to 23.8 in 1903 before improving gradually to reach nearly 29 in 1914. The subsequent war years brought about a further decline and except for a temporary revival in 1920 and 1921 the rate continued to fall to 14.1 in 1935, the lowest on record. From then there was a general upward trend to 25.2 in 1947 and since then there has been a falling off which has been more marked in the latest five years. The rate in 1967 was 18.3, which was well below the Australian rate of 19.4 and lower than the rate in any other State except New South Wales.

Ex-nuptial Births and Legitimations

The ex-nuptial birth rates for 1962 to 1966 were successively the highest recorded, whilst the 1967 rate was only fractionally lower than that for 1966. The rate had been about 3 per 100 births since the early 1920s and did not vary greatly until the late 1950s but has risen each year since 1959.

The legitimization of an ex-nuptial child upon the subsequent marriage of his or her parents which was first provided for in South Australia by the Legitimation Act, 1898, the provisions of which were later incorporated in the Births and Deaths Registration Act, was possible only if there was no legal impediment to the marriage of the parents at the time of the birth of the child. The Commonwealth *Marriage Act* 1961-1966, which came into operation on 1 September 1963, enables also, upon the subsequent marriage of the parents, the legitimization of a child whose parents were legally unable to marry at the time of the birth of the child. Legitimations under this Act take place whether or not the child was living at the time of marriage, and the child is considered legitimate from the date of

birth or in the case of a child born before 1 September 1963, at that date. The effect of the implementation of this change in legislation is shown in the following table.

Ex-nuptial Live Births and Legitimations, South Australia

Year	Ex-nuptial Live Births		Legitimations
	Number	Rate per 100 Births	
1957	651	3.33	36
1958	738	3.68	49
1959	745	3.66	51
1960	841	4.01	40
1961	1,026	4.58	76
1962	1,017	4.76	58
1963	1,059	4.96	245
1964	1,239	5.94	450
1965	1,310	6.27	268
1966	1,372	6.75	284
1967	1,375	6.74	295

NOTE: Prior to 1967 excluded full-blood Aboriginals.

Confinements and Live Births

The next table shows the number of confinements and live births in 1965 and 1966, classified separately for single births and for multiple births in which at least one issue was live-born.

Multiple births occur at a fairly regular rate of a little over ten cases per 1,000 confinements, having fallen below this level in only two years (1964 and 1966) since 1950. There is a marked tendency for multiple births to be of the same sex; in 1966 there were 125 cases of twins of the same sex compared with only 51 cases of one male and one female issue.

Confinements^(a) and Live Births: Class of Birth, South Australia

Particulars	1965				1966			
	Confinements (a)	Live Births			Confinements (a)	Live Births		
		Male	Female	Total		Male	Female	Total
Nuptial								
Single births ..	19,149	9,895	9,254	19,149	18,619	9,664	8,955	18,619
Twins	211	201	216	417	165	178	150	328
Triplets	5	8	7	15	—	—	—	—
Total nuptial ..	19,365	10,104	9,477	19,581	18,784	9,842	9,105	18,947
Ex-nuptial								
Single births ..	1,283	662	621	1,283	1,350	685	665	1,350
Twins	12	9	15	24	11	10	12	22
Triplets	1	3	—	3	—	—	—	—
Total ex-nuptial	1,296	674	636	1,310	1,361	695	677	1,372
Total	20,661	10,778	10,113	20,891	20,145	10,537	9,782	20,319

(a) Includes only those confinements which resulted in one or more live births.

In the table below confinements and live births in the latest two years have been shown in relation to the age group of the mother.

Confinements^(a) and Live Births: Age Group of Mother, South Australia

Age Group of Mother	1965				1966			
	Confinements (a)	Live Births			Confinements (a)	Live Births		
		Male	Female	Total		Male	Female	Total
10-14	3	3	—	3	10	5	5	10
15-19	2,168	1,120	1,064	2,184	2,249	1,190	1,067	2,257
20-24	6,966	3,644	3,386	7,030	6,835	3,518	3,364	6,882
25-29	5,962	3,100	2,923	6,023	5,826	3,048	2,832	5,880
30-34	3,167	1,673	1,541	3,214	2,976	1,583	1,426	3,009
35-39	1,793	921	901	1,822	1,687	907	808	1,715
40-44	562	293	282	575	533	267	270	537
45-49	39	23	16	39	24	15	9	24
Not stated	1	1	—	1	5	4	1	5
Total	20,661	10,778	10,113	20,891	20,145	10,537	9,782	20,319

(a) Includes only those confinements which resulted in one or more live births.

Nuptial confinements classified according to the relative age groups of the parents, and ex-nuptial confinements classified to the age group of the mother are shown for 1966 in the following table.

Confinements^(a): Relative Ages of Parents, South Australia, 1966

Age Group of Father (Nuptial Births)	Age Group of Mother							Total
	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	
Under 20	320	80	—	1	—	—	—	401
20-24	1,048	2,477	239	8	—	—	—	3,772
25-29	272	3,028	2,625	205	18	2	—	6,150
30-34	55	674	2,060	1,210	156	5	—	4,160
35-39	6	155	608	1,088	748	64	2	2,671
40-44	—	21	92	288	503	248	10	1,162
45-49	—	8	10	45	130	127	8	328
50 and over	—	2	6	17	59	54	1	139
Married mothers	1,701	6,445	5,640	2,862	1,614	500	21	(b) 18,784
Unmarried mothers	558	390	186	114	73	33	3	(b) 1,361
Total mothers	2,259	6,835	5,826	2,976	1,687	533	24	(b) 20,145

(a) Includes only those confinements which resulted in one or more live births.

(b) Includes those for which age was not stated.

The following table shows the first live births to married mothers in 1966 classified to age group of mother and duration of marriage. Only existing marriages are taken into account, therefore some inclusions in the table relate to the first birth of an existing marriage to a mother who has had also a child or children by a previous marriage.

**Nuptial First Live Births: Age Group of Mother and Duration of Marriage
South Australia, 1966**

Age Group of Mother	Duration of Existing Marriage																Total Nuptial First Births (a)	
	Months											Years						
	0	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5 and Over	
15-19	27	22	43	97	147	286	323	95	28	51	49	35	191	18	3	1	—	1,416
20-24	15	13	32	44	91	192	214	110	93	162	168	130	1,147	630	290	94	46	3,471
25-29	2	1	7	4	6	22	17	19	24	45	52	34	350	255	207	160	281	1,486
30-34	1	4	4	2	6	3	9	2	8	9	15	14	75	51	22	21	144	390
35-39	—	1	2	2	2	2	1	3	3	8	4	11	39	14	13	10	65	180
40-44	—	—	—	—	—	—	1	—	—	1	—	2	11	8	6	4	19	52
45-49	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	2
Total	45	41	88	149	252	505	565	229	156	276	288	226	1,813	977	541	291	555	6,997

(a) Live-born children only. In cases of multiple births the eldest live-born child is included.

DEATHS

The following table shows the number of deaths and death rates per 1,000 of the mean population since 1915.

Deaths and Death Rates, South Australia

Period	Number of Deaths			Death Rate (a)		
	Males	Females	Persons	Males	Females	Persons
Annual Average						
1915-19	2,613	2,187	4,800	11.91	9.49	10.67
1920-24	2,676	2,225	4,901	10.57	8.80	9.68
1925-29	2,762	2,272	5,034	9.74	8.21	8.98
1930-34	2,671	2,330	5,001	9.21	8.08	8.65
1935-39 (b)	2,929	2,501	5,430	9.89	8.47	9.19
1940-44 (b)	3,348	2,887	6,235	11.07	9.43	10.25
1945-49 (b)	3,389	2,980	6,369	10.48	9.12	9.80
1950-54	3,832	3,191	7,023	10.06	8.56	9.31
1955-59	4,248	3,430	7,678	9.62	7.97	8.80
1960-64	4,585	3,607	8,192	9.19	7.36	8.29
Year						
1963	4,678	3,523	8,201	9.21	7.04	8.14
1964	5,008	3,898	8,906	9.62	7.58	8.61
1965	4,836	3,952	8,788	9.04	7.47	8.26
1966	5,215	4,108	9,323	9.51	7.56	8.54
1967	5,031	4,040	9,071	9.01	7.30	8.16

NOTE : Prior to 1967 excludes full-blood Aborigines.

(a) Per 1,000 of mean population.

(b) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September 1939 to June 1947.

The death rate declined generally from over 15 in the 1860s to 8.4 in 1934 then rose to 11 in 1942 from which point there has been a further general decline. The 1961 rate of 8.1 is the lowest recorded in South Australia.

Male and female deaths in selected age groups for each of the last five years are shown in the following table.

Deaths in Age Groups, South Australia

Year	Age at Death							Total Deaths
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65 and Over
MALES								
1962....	306	44	84	82	189	446	754	2,641
1963....	265	45	85	83	201	473	825	2,701
1964....	282	52	113	105	219	409	893	2,934
1965....	276	55	91	88	197	522	863	2,744
1966....	272	54	120	82	224	454	945	3,064
FEMALES								
1962....	187	27	25	51	115	234	417	2,630
1963....	223	28	36	39	118	206	362	2,511
1964....	196	27	46	52	110	230	437	2,800
1965....	208	42	31	42	124	233	425	2,847
1966....	159	34	44	50	126	275	451	2,969

(a) Includes one death for which age was not stated.

A long established trend of increases in deaths at the higher ages has been offset to some degree by a decrease in those in the younger age groups. The effect of this trend related to the changes in age distribution of the population is illustrated in the next tables, which show age-specific death rates, *i.e.* deaths in each age group expressed as a rate per 1,000 of the population in that age group. Because age constitution of the population is known accurately only at censuses the periods shown are those with a census date as their approximate centre.

Age-Specific Death Rates: Males, South Australia

Age Group	Death Rate (a)							Reduction Per Cent 1880-82 to 1960-62
	1880-82	1900-02	1920-22	1932-34	1946-48	1953-55	1960-62	
0-4	51.85	32.12	19.98	9.90	8.09	6.41	5.82	89
5-9	3.33	2.81	2.33	1.18	1.00	0.52	0.50	85
10-14	2.59	1.85	1.55	1.08	0.68	0.65	0.46	82
15-19	4.48	2.88	2.41	1.69	1.42	1.50	1.08	76
20-24	4.85	4.19	3.47	2.35	1.44	1.88	1.37	72
25-29	6.32	5.16	3.67	2.51	1.59	1.70	1.59	75
30-34	7.51	5.30	3.97	2.51	1.88	1.57	1.62	78
35-39	9.00	6.77	5.12	3.23	2.41	2.29	2.08	77
40-44	12.25	8.50	6.10	4.73	3.63	3.56	3.43	72
45-49	16.10	10.26	8.37	6.82	6.12	5.48	5.44	66
50-54	17.29	14.19	11.58	9.82	10.74	10.16	9.24	47
55-59	25.28	20.74	18.99	15.11	16.28	15.71	15.75	38
60-64	31.77	30.23	26.02	24.98	26.08	24.33	24.39	23
65-69	46.67	47.24	41.62	36.14	40.08	39.31	37.84	19
70-74	63.52	64.27	62.49	57.07	60.79	62.59	59.47	6
75-79	92.49	89.66	105.50	92.60	97.69	94.55	88.56	4
80-84	138.02	140.35	158.90	147.86	145.56	141.64	135.85	2
85 and over	247.47	246.96	269.50	257.03	248.89	235.84	227.39	8
All ages.....	15.76	12.03	10.75	9.29	10.87	9.80	9.00	43

(a) Average annual number of deaths per 1,000 of population at ages shown.

Age-Specific Death Rates: Females, South Australia

Age Group	Death Rate (a)							Reduction Per Cent 1880-82 to 1960-62
	1880-82	1900-02	1920-22	1932-34	1946-48	1953-55	1960-62	
0-4	45.36	27.20	16.29	8.29	7.12	5.01	3.93	91
5-9	3.28	2.02	2.30	1.04	0.54	0.45	0.35	89
10-14	2.49	1.64	1.32	0.88	0.38	0.42	0.30	88
15-19	4.16	3.47	2.71	1.25	0.75	0.52	0.37	91
20-24	5.59	4.16	2.91	2.36	1.04	0.63	0.58	90
25-29	8.01	5.00	3.95	2.73	1.65	0.85	0.70	91
30-34	7.67	5.66	4.18	2.66	1.91	0.99	0.96	87
35-39	10.29	6.90	5.27	3.85	2.03	1.79	1.33	87
40-44	9.76	7.85	4.99	4.10	3.48	2.56	1.80	82
45-49	11.65	8.20	6.42	5.80	4.59	3.65	3.03	74
50-54	13.09	10.83	9.18	8.06	7.09	5.88	5.22	60
55-59	14.86	14.08	10.65	11.24	10.33	9.04	7.82	47
60-64	24.30	20.45	18.07	17.68	14.97	14.06	12.74	48
65-69	36.27	35.51	33.15	27.16	25.22	23.01	21.05	42
70-74	53.10	53.80	46.20	42.19	42.17	40.35	35.52	33
75-79	93.21	87.96	83.56	75.53	72.07	72.20	58.28	37
80-84	94.83	126.07	131.63	121.15	121.57	109.92	108.61	(b) 15
85 and over	161.90	222.58	232.84	233.59	214.35	215.80	199.38	(b) 23
All ages.....	13.97	10.25	9.00	8.23	9.19	8.31	7.38	47

(a) Average annual number of deaths per 1,000 of population at ages shown.

(b) Increase.

Over the period there was a marked reduction in death rates with greater reduction in female than in male rates in all but the groups aged eighty and over.

CAUSES OF DEATH

The classification of causes of deaths in Australia since 1907 has been based on International Lists of Causes of Deaths. From time to time revisions to these lists have affected the comparability of the figures. Up to 1949 the effect of these revisions had been negligible but the introduction in 1950 of the Sixth Revision of the International Statistical Classification introduced major changes in the classification which, together with the adoption of more flexible rules for selecting the underlying cause where certificates of cause of death showed more than one cause, affected the comparability of figures for years before 1950 with those for 1950 and later. A complete classification of causes of deaths for each State and Territory of Australia for 1950 according to both the Fifth and Sixth Revisions was published by the Commonwealth Statistician in Demography 1950, Bulletin No. 68.

The Seventh Revision adopted in Australia in 1958 did not affect comparability significantly. International Classification Seventh Revision code numbers have been shown where appropriate in the tables which follow.

In the following table deaths registered in 1966 are shown classified according to the abbreviated list of the Seventh Revision together with the percentage from each cause and the rate per 10,000 of mean population.

Causes of Deaths, South Australia, 1966

Abbreviated Classification (a)	International Classification Code Number	Number of Deaths	Proportion of Total	Rate per 10,000 of Mean Population
			%	
1 Tuberculosis of respiratory system...	001-008	23	0.25	0.21
2 Tuberculosis, other forms	010-019	2	0.02	0.02
3 Syphilis and its sequelae	020-029	3	0.03	0.03
6 Dysentery, all forms	045-048	1	0.01	0.01
9 Whooping cough	056	1	0.01	0.01
10 Meningococcal infections	057	3	0.03	0.03
17 Other infective and parasitic diseases	(b)	11	0.12	0.10
18 Malignant neoplasms	140-205	1,445	15.50	13.24
19 Benign and unspecified neoplasms ..	210-239	16	0.17	0.15
20 Diabetes mellitus	260	165	1.77	1.51
21 Anaemias	290-293	20	0.22	0.18
22 Vascular lesions affecting central nervous system	330-334	1,303	13.98	11.94
23 Non-meningococcal meningitis	340	4	0.04	0.04
24 Rheumatic fever	400-402	1	0.01	0.01
25 Chronic rheumatic heart disease	410-416	60	0.64	0.55
26 Arteriosclerotic and degenerative heart disease	420-422	3,117	33.43	28.56
27 Other diseases of heart	430-434	242	2.60	2.22
28 Hypertension with heart disease	440-443	107	1.15	0.98
29 Hypertension without mention of heart	444-447	43	0.46	0.39
30 Influenza	480-483	12	0.13	0.11
31 Pneumonia	490-493	357	3.83	3.27
32 Bronchitis	500-502	166	1.78	1.52
33 Ulcer of stomach and duodenum	540, 541	44	0.47	0.40
34 Appendicitis	550-553	9	0.10	0.08
35 Intestinal obstruction and hernia ...	560, 561, 570	61	0.65	0.56
36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn	543, 571, 572	43	0.46	0.39
37 Cirrhosis of liver	581	71	0.76	0.65
38 Nephritis and nephrosis	590-594	67	0.72	0.61
39 Hyperplasia of prostate	610	27	0.29	0.25
40 Complications of pregnancy, childbirth, and the puerperium	640-689	4	0.04	0.04
41 Congenital malformations	750-759	102	1.09	0.94
42 Birth injuries, postnatal asphyxia, and atelectasis	760-762	61	0.65	0.56
43 Infections of the newborn	763-768	8	0.09	0.07
44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	128	1.37	1.17
45 Senility without mention of psychosis, ill-defined and unknown causes ..	780-795	79	0.85	0.72
46 All other diseases	Residual	795	8.53	7.29
47 Motor vehicle accidents	E810-E835	331	3.55	3.03
48 All other accidents	{ E800-E802, E840-E962 }	248	2.66	2.27
49 Suicide and self-inflicted injury	{ E963, E970-E979 }	136	1.46	1.25
50 Homicide and operations of war	{ E964, E965, E980-E999 }	7	0.08	0.06
Total all causes		9,323	100.00	85.42

(a) No deaths were recorded in 1966 in the following categories—4 Typhoid fever (040), 5 Cholera (043), 7 Scarlet fever and streptococcal sore throat (050, 051), 8 Diphtheria (055), 11 Plague (058), 12 Acute poliomyelitis (080), 13 Smallpox (084), 14 Measles (085), 15 Typhus and other rickettsial diseases (100-108), 16 Malaria (110-117).

(b) No. 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

The following table shows for 1966 the main causes of deaths in selected age groups.

Main Causes of Deaths in Age Groups, South Australia, 1966

International Classification Number	Age Group and Cause of Death	Deaths	Pro- portion of Total Deaths in Age Groups	Pro- portion of Total Deaths from the Specified Cause
		No.	%	%
	0-4 Years			
750-759	Congenital malformations	90	20.9	88.2
774-776	Immaturity	57	13.2	100.0
800-999	Accidental and violent deaths	46	10.7	6.4
760, 761	Birth injuries	41	9.5	100.0
480-502, 763	Pneumonia, bronchitis and influenza....	35	8.1	6.5
762	Post-natal asphyxia and atelectasis	20	4.6	100.0
	Other causes	142	33.0	
	5-14 Years			
800-999	Accidental and violent deaths	41	46.6	5.7
140-205	Cancer (all forms)	15	17.0	1.0
480-502	Pneumonia, bronchitis and influenza....	10	11.3	1.9
750-759	Congenital malformations	2	2.3	2.0
	Other causes	20	22.8	
	15-24 Years			
800-999	Accidental and violent deaths	123	75.0	17.0
140-205	Cancer (all forms)	16	9.8	1.1
410-443	Diseases of the heart	3	1.8	0.1
	Other causes	22	13.4	
	25-34 Years			
800-999	Accidental and violent deaths	69	52.3	9.6
140-205	Cancer (all forms)	23	17.4	1.6
410-443	Diseases of the heart	7	5.3	0.2
480-502	Pneumonia, bronchitis and influenza....	6	4.5	1.1
	Other causes	27	20.5	
	35-44 Years			
800-999	Accidental and violent deaths	102	29.1	14.1
410-443	Diseases of the heart	78	22.3	2.2
140-205	Cancer (all forms)	72	20.6	5.0
330-334	Vascular lesions affecting central nervous system	19	5.4	1.5
480-502	Pneumonia, bronchitis and influenza....	9	2.6	1.7
	Other causes	70	20.0	
	45-54 Years			
410-443	Diseases of the heart	221	30.3	6.3
140-205	Cancer (all forms)	204	28.0	14.1
800-999	Accidental and violent deaths	87	11.9	12.0
330-334	Vascular lesions affecting central nervous system	73	10.0	5.6
480-502	Pneumonia, bronchitis and influenza....	26	3.6	4.8
	Other causes	118	16.2	
	55-64 Years			
410-443	Diseases of the heart	585	41.9	16.6
140-205	Cancer (all forms)	327	23.4	22.6
330-334	Vascular lesions affecting central nervous system	147	10.5	11.3
800-999	Accidental and violent deaths	87	6.2	12.0
480-502	Pneumonia, bronchitis and influenza....	48	3.5	8.9
	Other causes	202	14.5	

International Classification Number	Age Group and Cause of Death	Deaths	Proportion of Total Deaths in Age Groups	Proportion of Total Deaths from the Specified Cause
		No.	%	%
	65-74 Years			
410-443	Diseases of the heart	1,061	47.2	30.1
140-205	Cancer (all forms)	384	17.1	26.6
330-334	Vascular lesions affecting central nervous system	303	13.5	23.3
480-502	Pneumonia, bronchitis and influenza	117	5.2	21.7
800-999	Accidental and violent deaths	61	2.7	8.4
450-456	Diseases of the arteries	54	2.4	20.5
	Other causes	266	11.9	
	75 Years and Over			
410-443	Diseases of the heart	1,569	41.4	44.5
330-334	Vascular lesions affecting central nervous system	754	19.9	57.9
140-205	Cancer (all forms)	397	10.5	27.5
480-502	Pneumonia, bronchitis and influenza	288	7.6	53.3
450-456	Diseases of the arteries	180	4.8	68.2
800-999	Accidental and violent deaths	106	2.8	14.7
	Other causes	493	13.0	

Mortality in early childhood has been reduced considerably over the years, mainly by improved preventive measures and the use of new drugs. This improvement has increased the number of persons reaching higher ages where the risk from degenerative diseases is greatest; consequently deaths from degenerative diseases now constitute a higher proportion of deaths than formerly.

Infectious Diseases

Deaths from certain infectious diseases over the period 1915 to 1964 are shown in the following table.

Deaths from Certain Infectious Diseases, South Australia

Period	Respiratory Tuberculosis (001-008)	Typhoid Fever (040)	Scarlet Fever (050)	Diphtheria (055)	Whooping Cough (056)	Acute Poliomyelitis (080)	Measles (085)
Annual Average							
1915-19	339	311	4	94	21	(a)	14
1920-24	330	28	9	70	28	9	7
1925-29	313	12	2	25	13	3	12
1930-34	261	7	2	12	13	3	6
1935-39	211	4	1	27	11	6	2
1940-44	190	3	2	30	10	2	9
1945-49	161	1	1	7	8	9	6
1950-54	81	—	—	1	2	23	3
1955-59	43	—	—	1	1	2	3
1960-64	32	—	—	—	1	1	2

(a) Not separately recorded.

In 1956 a poliomyelitis immunisation programme was begun and since then the incidence of and deaths from this disease have declined (see Part 6.6).

There has been a long-term downward trend in deaths from respiratory tuberculosis. This has been assisted by the introduction in March 1952 of compulsory chest X-ray surveys of the population, enabling early detection and therefore more effective treatment of the disease. There were twenty-three deaths from respiratory tuberculosis in 1966.

Various factors have contributed to the decrease in the incidence of and deaths from infectious diseases generally, such as advances in medical science, improved hygiene, and the general acceptance of immunisation of infants and young children against such diseases as diphtheria and whooping cough.

Diseases of the Heart

The following table shows the number of deaths attributed to heart disease and rates per 10,000 of the mean population since 1920.

Deaths from Diseases of the Heart (410-443), South Australia

Period	Number of Deaths			Death Rate (a)		
	Males	Females	Persons	Males	Females	Persons
Annual Average						
1920-24	292	249	541	11.52	9.87	10.70
1925-29	314	276	590	11.08	9.95	10.52
1930-34	438	368	806	15.10	12.78	13.94
1935-39	639	498	1,137	21.63	16.88	19.25
1940-44	886	704	1,590	29.29	23.02	26.14
1945-49	1,094	822	1,916	33.84	25.15	29.47
1950-54	1,342	996	2,338	35.22	26.70	31.01
1955-59	1,519	1,111	2,630	34.38	25.81	30.15
1960-64	1,776	1,245	3,021	35.61	25.42	30.56
Year						
1962	1,715	1,301	3,016	34.50	26.64	30.60
1963	1,848	1,166	3,014	36.39	23.31	29.90
1964	1,964	1,390	3,354	37.72	27.04	32.41
1965	1,927	1,384	3,311	36.02	26.16	31.12
1966	2,065	1,461	3,526	37.65	26.90	32.30

(a) Number of deaths per 10,000 of mean population.

The percentage of total deaths classified to heart disease has increased from 11.0 per cent in the period 1920-24 to 36.9 per cent during 1960-64 and over the same period the rate has increased from 10.7 to 30.6. However, apart from the effect of the ageing population, there are other difficult-to-measure factors which have influenced this large increase, viz changes in the mode of certification and classification, and improvement both in diagnosis and certification; therefore a comparison of numbers, rates and percentages of deaths from this cause over the period should be made with caution.

Malignant Neoplasms

For 1950 and subsequent years, deaths from malignant neoplasms (*i.e.* cancer) include those deaths classified to neoplasms of lymphatic and haematopoietic tissues (including Hodgkin's disease, leukaemia and aleukaemia)—there were 135 so assigned in 1966.

Deaths from Malignant Neoplasms (140-205), South Australia

Period	Number of Deaths			Death Rate (a)		
	Males	Females	Persons	Males	Females	Persons
Annual Average						
1920-24	244	232	476	9.65	9.16	9.41
1925-29	291	264	555	10.27	9.54	9.91
1930-34	325	328	653	11.23	11.37	11.30
1935-39	348	362	710	11.77	12.26	12.02
1940-44	363	409	772	12.02	13.35	12.69
1945-49	416	424	840	12.88	12.97	12.92
1950-54	462	483	945	12.11	12.96	12.53
1955-59	565	519	1,084	12.79	12.06	12.43
1960-64	656	617	1,273	13.16	12.58	12.88
Year						
1962	683	662	1,345	13.74	13.55	13.65
1963	668	616	1,284	13.16	12.31	12.74
1964	723	644	1,367	13.88	12.53	13.21
1965	722	661	1,383	13.50	12.50	13.00
1966	796	649	1,445	14.51	11.95	13.24

(a) Number of deaths per 10,000 of mean population.

The table indicates a steady increase in deaths from this cause and the table of age-specific death rates which follows shows how the rate increases with age. Therefore, the increase over the period in the rate at all ages is partly due to the increasing proportion of the population in the higher age groups. Periods shown below are those spanning six censuses.

Malignant Neoplasms (140-205): Age-Specific Death Rates, South Australia

Age Group	Death Rate (a)					
	1910-12	1920-22	1932-34	1946-48	1953-55	1960-62
	MALES					
0-4	0.55	0.97	—	0.49	1.18	1.02
5-14	0.17	0.39	0.12	0.51	1.05	0.82
15-24	0.69	0.33	0.31	0.07	1.64	0.86
25-34	0.97	0.89	1.05	1.18	1.21	1.33
35-44	5.45	3.48	3.36	2.57	4.63	4.29
45-54	10.83	13.08	8.65	12.35	10.42	11.57
55-64	39.66	37.75	35.41	32.77	33.43	36.52
65-74	68.58	87.18	89.18	82.62	69.54	83.67
75 and over	84.88	109.91	147.57	148.98	149.45	142.29
All ages	7.70	9.48	11.40	13.60	12.54	12.86
	FEMALES					
0-4	0.28	0.38	0.30	0.41	1.24	0.79
5-14	0.17	0.39	0.13	0.23	0.34	0.79
15-24	0.24	0.49	0.25	0.40	0.72	0.46
25-34	1.30	1.09	1.49	1.74	1.99	2.16
35-44	6.68	6.04	6.32	4.42	5.95	6.66
45-54	16.01	17.53	16.86	15.39	12.67	16.69
55-64	33.00	32.56	34.61	30.12	32.91	28.19
65-74	60.72	63.69	55.98	57.21	52.26	52.24
75 and over	87.80	104.61	115.15	108.52	98.41	99.76
All ages	7.72	9.03	11.37	13.12	12.64	12.68

(a) Average annual number of deaths per 10,000 of population at ages shown.

Deaths from malignant neoplasms in 1966 according to the site of the disease, sex, and in broad age groups are shown in the following table.

**Malignant Neoplasms: Deaths Classified by Site and Sex in Age Groups
South Australia, 1966**

Site of Disease	Sex	Age Group				All Ages
		Under 25	25-44	45-64	65 and Over	
Malignant neoplasm of :						
Buccal cavity and pharynx (140-148)	M	1	—	11	14	26
	F	—	—	—	1	1
Digestive organs and peritoneum (150-159)	M	1	16	72	153	242
	F	1	5	59	164	229
Respiratory system (160-165) ..	M	—	3	107	91	201
	F	—	4	15	12	31
Breast (170)	M	—	—	1	—	1
	F	—	16	68	54	138
Uterus (171-174)	F	—	4	22	24	50
Other female genital organs (175-176)	F	1	11	24	22	58
Male genital organs (177-179) ..	M	—	3	15	91	109
Urinary organs (180, 181)	M	2	2	15	29	48
	F	—	—	7	14	21
Skin (190, 191)	M	1	3	10	9	23
	F	—	3	6	6	15
Brain and nervous system (193)	M	8	1	20	6	35
	F	5	2	11	3	21
Other and unspecified sites (192, 194-199)	M	—	3	20	11	34
	F	1	1	7	18	27
Neoplasms of lymphatic and haematopoietic tissues (200-205)	M	12	9	26	30	77
	F	5	9	15	29	58
Total (140-205)	M	25	40	297	434	796
	F	13	55	234	347	649

Vascular Lesions Affecting Central Nervous System

The increase in both numbers and rates of deaths from vascular lesions of the central nervous system (commonly referred to as a 'stroke') is further evidence of the effect of the increased proportion of the population at higher ages. Although the rate generally has fallen since 1954, deaths from this cause still constituted in 1966 nearly 20 per cent of deaths of persons aged seventy-five years and over. During the period 1920-24 deaths classified to this cause were only 6.7 per cent of all deaths, but during 1960-64 they were 13.9 per cent of all deaths.

Deaths from Vascular Lesions Affecting Central Nervous System (330-334)**South Australia**

Period	Number of Deaths			Death Rate (a)		
	Males	Females	Persons	Males	Females	Persons
Annual Average						
1920-24	166	162	328	6.55	6.42	6.49
1925-29	171	188	359	6.03	6.80	6.41
1930-34	201	231	432	6.94	8.01	7.47
1935-39	231	294	525	7.84	9.95	8.90
1940-44	271	368	639	8.96	12.03	10.51
1945-49	321	431	752	9.92	13.21	11.57
1950-54	404	553	957	10.62	14.82	12.70
1955-59	481	614	1,095	10.89	14.27	12.55
1960-64	490	645	1,135	9.83	13.16	11.48
Year						
1962	494	633	1,127	9.94	12.96	11.44
1963	490	645	1,135	9.65	12.89	11.26
1964	505	692	1,197	9.70	13.46	11.57
1965	548	695	1,243	10.24	13.14	11.68
1966	564	739	1,303	10.28	13.61	11.94

(a) Number of deaths per 10,000 of mean population.

INFANT MORTALITY

The infant mortality rate, *i.e.* the number of deaths of children under one year to every 1,000 live births, has shown a marked decline from 148.77 in 1875-79 to 19.17 in 1960-64, and the rate of 16.97 in 1967 was the lowest ever recorded in this State. Many factors have contributed to the remarkable improvement in the infant mortality rate, principally measures taken (both legislative and educative) to control preventable diseases and the provision of facilities by the Mothers and Babies Health Association for the promotion of child health.

The rate for male infant deaths is consistently higher than for female infant deaths.

Infant Deaths, South Australia

Year	Number of Deaths			Death Rate (a)		
	Males	Females	Persons	Males	Females	Persons
1963	226	173	399	20.53	16.70	18.67
1964	232	165	397	21.38	16.47	19.03
1965	224	161	385	20.78	15.92	18.43
1966	222	134	356	21.07	13.70	17.52
1967	187	159	346	17.97	15.93	16.97

NOTE : Prior to 1967 excludes full-blood Aborigines.

(a) Number of infant deaths per 1,000 live births.

Improvement has been much greater for deaths of infants a week or more old than for those under one week. However, to a large extent the factors influencing mortality in these two groups are different. Deaths of infants under one week mainly can be related to pre-natal causes which also have a bearing on still

births. Combinations of still birth rates and rates of infant mortality to various ages have been shown in the following table which commences at the first five-yearly period after the introduction of compulsory registration of still births in South Australia. These figures give a clearer indication of the improvement which has been effected in the saving of life.

Infant Mortality and Still Births, South Australia

Period	Still Births Plus Deaths Under 1 Week		Still Births Plus Deaths Under 1 Month		Still Births Plus Deaths Under 1 Year	
	Number	Rate (a)	Number	Rate (a)	Number	Rate (a)
Annual Average						
1940-44 ..	495	41.07	558	46.30	716	59.40
1945-49 ..	613	38.35	668	41.79	798	49.92
1950-54 ..	533	29.44	578	31.92	704	38.88
1955-59 ..	503	25.46	543	27.49	689	34.88
1960-64 ..	510	23.54	551	25.44	679	31.35
Year						
1963	501	23.16	538	24.87	661	30.56
1964	503	23.82	529	25.05	649	30.73
1965	487	23.03	519	24.54	641	30.31
1966	438	21.31	470	22.86	593	28.85
1967	423	20.54	452	21.94	557	27.04

NOTE: Prior to 1967 excludes full-blood Aborigines.

(a) Per 1,000 of all births (live and still).

The table which follows shows infant mortality rates in age groups since 1905.

Infant Mortality Rates: Age Groups, South Australia

Period	Number of Deaths per 1,000 Live Births at Ages:					Total Under 12 Months
	Under 1 Week	1 Week and Under 1 Month	1 Month and Under 3 Months	3 Months and Under 6 Months	6 Months and Under 12 Months	
Annual Average						
1905-09 ..	27.68		11.54	12.40	17.21	68.83
1910-14 ..	28.55		10.81	12.50	15.96	67.82
1915-19 ..	29.88		8.80	9.41	13.76	61.85
1920-24 ..	19.82	8.86	8.26	8.94	12.57	58.45
1925-29 ..	20.35	6.73	5.66	5.93	7.87	46.54
1930-34 ..	18.69	4.89	4.12	4.23	6.12	38.05
1935-39 ..	17.81	3.98	3.65	2.88	4.54	32.86
1940-44 ..	15.75	5.37	4.60	3.83	5.02	34.57
1945-49 ..	15.50	3.52	2.88	2.44	3.01	27.35
1950-54 ..	13.08	2.53	2.25	2.08	2.75	22.69
1955-59 ..	11.79	2.06	2.45	2.42	2.65	21.37
1960-64 ..	11.25	1.93	1.93	1.99	2.07	19.17
Year						
1963	11.19	1.73	1.63	2.20	1.92	18.67
1964	12.03	1.25	2.06	2.06	1.63	19.03
1965	11.06	1.53	1.92	1.77	2.15	18.43
1966	9.89	1.57	2.07	2.02	1.97	17.52
1967	10.40	1.42	1.57	2.01	1.57	16.97

NOTE: Prior to 1967 excludes full-blood Aborigines.

The causes of infant deaths in 1966 classified according to age group are shown in the following table.

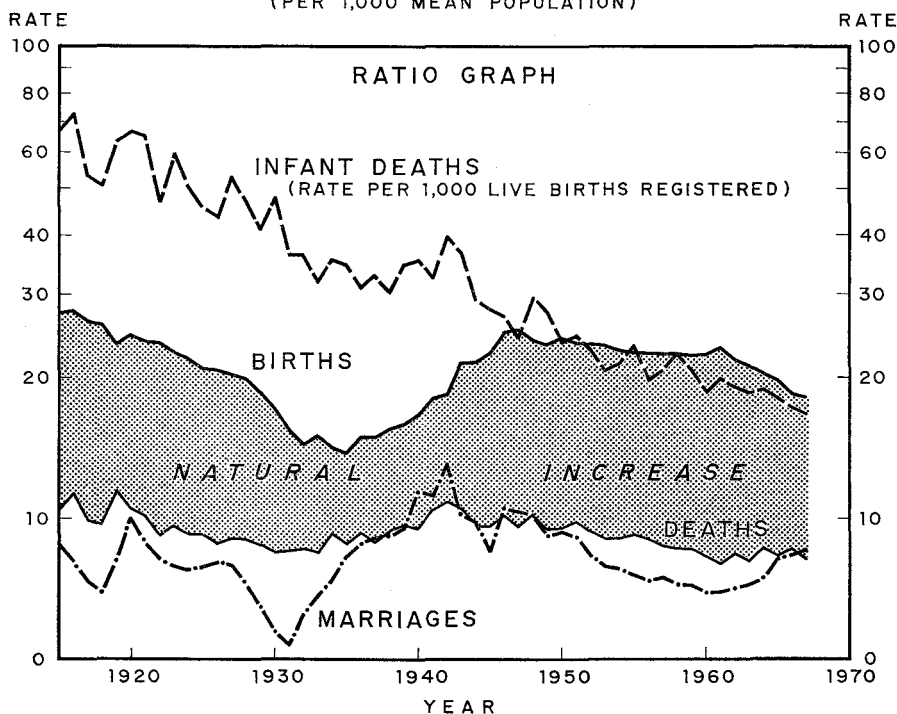
Infant Mortality: Causes in Age Groups, South Australia, 1966

Cause of Death	Age Group					Total Under 12 Months
	Under 1 Week	1 Week and Under 1 Month	1 Month and Under 3 Months	3 Months and Under 6 Months	6 Months and Under 12 Months	
Infective and parasitic diseases (001-138)	—	—	2	3	1	6
Diseases of the nervous system and sense organs (330-398)	—	—	3	—	4	7
Diseases of the respiratory system (including pneumonia of newborn) (470-527, 763)	2	3	8	10	11	34
Intestinal obstruction and hernia (560, 561, 570)	—	1	—	—	—	1
Gastro-enteritis and colitis (including diarrhoea of newborn) (571, 764)	—	—	—	2	8	10
Congenital malformations (750-759)	32	15	18	10	9	84
Birth injuries (760, 761)	39	2	—	—	—	41
Post-natal asphyxia and atelectasis (762)	16	3	—	—	1	20
Immaturity (774-776) (a)	56	1	—	—	—	57
Other diseases peculiar to early infancy (765-773)	52	5	6	9	2	74
All other diseases	4	1	2	4	1	12
Accidents, poisonings, violence (E800-E999)	—	1	3	3	3	10
Total all causes	201	32	42	41	40	356

(a) Immaturity unqualified or with mention of any other subsidiary condition not classified as peculiar to early infancy.

VITAL STATISTICS RATES

SOUTH AUSTRALIA 1915 TO 1967
(PER 1,000 MEAN POPULATION)



EXPECTATION OF LIFE

The expectation of life at age x is defined as the average number of years lived after age x by each of a group of persons aged exactly x years. Because detailed information of the age structure and mortality experience of the population is required, the calculation of the expectation of life for each age is generally based on a period which spans a population census (the only time at which a sufficiently accurate age distribution is available).

The table which follows shows the expectation of life at specified ages in Australia based on mortality experience during each of the two decades to 1910 and for the three years spanning each of the Censuses of 1921, 1933, 1947, 1954 and 1961.

Expectation of Life, Australia

Age	1891-1900	1901-10	1920-22	1932-34	1946-48	1953-55	1960-62
MALES							
0.....	51.1	55.2	59.2	63.5	66.1	67.1	67.9
5.....	55.6	57.9	60.4	62.6	63.8	64.3	64.8
10.....	51.4	53.5	56.0	58.0	59.0	59.5	59.9
15.....	47.0	49.0	51.4	53.4	54.3	54.7	55.1
20.....	42.8	44.7	47.0	48.8	49.6	50.1	50.4
25.....	38.9	40.6	42.7	44.4	45.0	45.5	45.8
30.....	35.1	36.5	38.4	39.9	40.4	40.9	41.1
35.....	31.3	32.5	34.2	35.5	35.8	36.3	36.5
40.....	27.7	28.6	30.1	31.1	31.2	31.7	31.8
45.....	24.0	24.8	26.0	26.9	26.8	27.2	27.4
50.....	20.5	21.2	22.2	22.8	22.7	22.9	23.1
55.....	17.1	17.7	18.5	19.0	18.8	19.0	19.2
60.....	14.0	14.3	15.1	15.6	15.4	15.5	15.6
65.....	11.3	11.3	12.0	12.4	12.3	12.3	12.5
70.....	8.9	8.7	9.3	9.6	9.6	9.6	9.8
75.....	6.7	6.6	6.9	7.2	7.2	7.3	7.5
80.....	5.0	5.0	5.0	5.2	5.4	5.5	5.6
FEMALES							
0.....	54.8	58.8	63.3	67.1	70.6	72.8	74.2
5.....	58.6	60.8	63.6	65.6	67.9	69.6	70.8
10.....	54.5	56.4	59.2	61.0	63.1	64.8	65.9
15.....	50.0	51.9	54.6	56.3	58.3	59.9	61.0
20.....	45.7	47.5	50.0	51.7	53.5	55.1	56.2
25.....	41.7	43.4	45.7	47.2	48.7	50.2	51.3
30.....	37.9	39.3	41.5	42.8	44.1	45.4	46.5
35.....	34.1	35.4	37.3	38.4	39.5	40.7	41.7
40.....	30.5	31.5	33.1	34.0	34.9	36.0	37.0
45.....	26.7	27.6	29.0	29.7	30.5	31.4	32.3
50.....	22.9	23.7	24.9	25.6	26.1	27.0	27.9
55.....	19.3	19.9	21.0	21.6	22.0	22.8	23.6
60.....	15.9	16.2	17.2	17.7	18.1	18.8	19.5
65.....	12.7	12.9	13.6	14.2	14.4	15.0	15.7
70.....	9.9	10.0	10.4	11.0	11.1	11.6	12.2
75.....	7.4	7.6	7.7	8.2	8.3	8.7	9.2
80.....	5.5	5.7	5.6	6.0	6.0	6.3	6.7

Generally, the figures shown in the table indicate that the number of years which people of all ages in Australia can expect to live has increased steadily since the turn of the century.

5.4 MIGRATION

History of Migration

Since the early settlement of the colony of South Australia, increases in the population from migration have occurred in times of increased economic activity whilst loss of population has occurred in times of depression in this State and/or increased economic activity elsewhere.

The discovery of minerals in other States attracted many South Australians. The first major exodus came with the discovery of gold in Victoria in 1851, followed in 1884, by a movement across the border into New South Wales to the newly opened silver-lead mines at Broken Hill. The third exodus of people from the State was due to the discovery of gold in Kalgoorlie in Western Australia in the 1890s.

Since 1901 immigrants entered Australia and South Australia in four distinct phases of the assisted migration plan. It is estimated that during the period 1901 to 1952, after making allowances for war losses and those assisted migrants who did not, in the end, remain in Australia, the net number of 'assisted' migrants was about twice the number of 'unassisted'.

As the depression years with which the century opened gave way to a period of more stable economic conditions, assisted migration was resumed about 1906. Immigration gained impetus during the years 1910 to 1912 but the movement was interrupted by war in 1914. After the war, the resumption of assisted migration was accompanied by a flow of unassisted migrants greater than for many decades. This movement was halted by the depression of the 1930s and when reintroduced in 1939 was almost immediately stopped by the outbreak of war in September. In the immediate post-war years, assisted migration was again resumed and the numbers brought to Australia were far greater than for any other comparable period.

South Australia suffered a substantial loss of population through migration in the period from 1928 to the mid-1930s.

Regulation of Immigration Into Australia

Under the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws with respect to immigration, emigration, aliens and the influx of criminals.

Immigration into Australia is regulated by the *Migration Act* 1958-1966 which came into force on 1 June 1959, and repealed the *Immigration Act* 1901-1949 and the *Aliens Deportation Act* 1948.

The *Aliens Act* 1947-1966 provides that a register of aliens shall be maintained for every State or mainland Territory of the Commonwealth. Unless exempted, aliens sixteen years of age and over are required to register with the Department of Immigration. There were 42,734 aliens registered in South Australia and 10,845 alien children under sixteen years of age at 31 December 1967.

Legislation and conditions of immigration into Australia are discussed in detail in the Year Book of the Commonwealth of Australia.

Overseas Arrivals and Departures

Since 1924 the movements of overseas travellers have been classified according to declared intention regarding residence into two main categories, short term and long term (including permanent). For short term movements, overseas visitors and Australian residents are identified separately.

The principal categories of travellers according to stated purpose of travel are as follows:

Permanent movement; consisting of persons arriving with stated intent to settle permanently in Australia, and Australian residents departing with stated intent to reside permanently abroad.

Long term movement; consisting of the arrival of visitors and the departure of residents with stated intent to stay (in Australia or in a country abroad respectively) for twelve months or more.

Short term movement; consisting of all other movements, including the movement of Australian troops irrespective of period of stay.

Separate figures for permanent and long term movements are not available on a State basis; hence these movements are combined in the table below showing overseas arrivals at, and departures from, South Australia. This table does not include persons who disembarked in other ports in Australia and subsequently settled in South Australia or South Australians who embarked from other ports for overseas. These movements would be included in interstate migration.

Overseas Arrivals and Departures: Intended Term of Residence, South Australia

Year	Long Term and Permanent		Short Term				Total		
			Australian Residents		Visitors				
	Males	Females	Males	Females	Males	Females	Males	Females	Persons
ARRIVALS									
1957....	2,642	2,534	504	592	309	211	3,455	3,337	6,792
1958....	2,629	2,904	564	644	454	178	3,647	3,726	7,373
1959....	3,455	3,264	572	469	601	202	4,628	3,935	8,563
1960....	2,990	2,786	671	592	446	218	4,107	3,596	7,703
1961....	3,443	3,365	469	437	465	159	4,377	3,961	8,338
1962....	2,526	2,542	588	624	619	240	3,733	3,406	7,139
1963....	3,275	3,287	671	739	577	296	4,523	4,322	8,845
1964....	5,019	5,101	650	686	632	282	6,301	6,069	12,370
1965....	3,720	3,945	594	692	560	358	4,874	4,995	9,869
1966....	3,739	3,857	729	820	583	367	5,051	5,044	10,095
DEPARTURES									
1957....	774	655	431	461	686	146	1,891	1,262	3,153
1958....	1,187	971	695	556	482	189	2,364	1,716	4,080
1959....	1,460	1,123	807	621	673	256	2,940	2,000	4,940
1960....	1,541	1,299	1,211	1,024	621	263	3,373	2,586	5,959
1961....	1,368	1,155	1,226	980	533	233	3,127	2,368	5,495
1962....	1,470	1,339	914	831	717	303	3,101	2,473	5,574
1963....	1,677	1,520	913	901	682	338	3,272	2,759	6,031
1964....	1,724	1,653	1,087	1,131	815	470	3,626	3,254	6,880
1965....	2,010	2,155	1,876	1,411	708	546	4,594	4,112	8,706
1966....	2,358	2,275	1,345	1,504	850	687	4,553	4,466	9,019

NOTE: Crew members and 'through' passengers (i.e. persons remaining on board a ship while in Australian waters or travelling in an aircraft passing through Australia) are excluded.

The number of long-term and permanent arrivals in 1964 (10,120) and departures in 1966 (4,633) were the highest ever recorded in South Australia.

Revised questions for travellers introduced in 1958 have permitted the separation of permanent from other long term movements, and also the identification of former settlers departing among the permanent departures. This information, available for the whole of Australia only, shows that in 1967 there

were 22,302 former settlers leaving Australia who stated that they were departing permanently. Of these 13,050 intended to settle in the United Kingdom or Ireland, 2,601 in New Zealand, 1,815 in other Commonwealth countries, 2,815 in European foreign countries and 1,357 in the United States of America. Other residents departing permanently totalled 8,502, of whom 1,710 intended to settle in the United Kingdom or Ireland, 2,066 in New Zealand, 1,464 in Papua and New Guinea and 1,473 in other Commonwealth countries.

Assisted Migration

Resumption of migration was the subject of negotiation between the Commonwealth and British Governments towards the end of 1945, and two agreements were signed in March 1946. These agreements, which came into operation on 31 March 1947, provided for free and assisted passages to be granted to British residents desirous of settling in Australia. The Free Passage Agreement, which applied to British ex-servicemen and their dependants was terminated in February 1955. From April 1949, the Assisted Passage Agreement continued in operation under renewal from time to time, and was renewed for five years from 1 April 1967.

Under the existing financial arrangements, the British Government's contribution towards the Assisted Passage Scheme is decided when the agreement is extended, and for the five years from April 1967, was fixed at a maximum amount of \$375,000 a year.

The number of British migrants who came to Australia under the Free and Assisted Passage Agreements during the period January 1947 to June 1966 totalled 665,710 and 74,451 of these stated at the time that their proposed destination was South Australia. Included in the Australian total shown above were 164,024 Commonwealth nominees who comprised workers selected against known and assessed employment demands in Australia.

Since the commencement of the assisted passage schemes in 1947, the migration of unaccompanied children and youths from Britain has been encouraged under the auspices of approved voluntary organisations.

An agreement to settle displaced persons in Australia was made with the International Refugee Organisation in July 1947. Migration schemes with the governments of other countries have been entered into including the Netherlands and Italian schemes in 1951, the German, Austrian, and Greek schemes in 1952, and others. The most recent was an agreement reached with the government of Turkey in January 1968.

Citizenship and Naturalisation

The *Nationality and Citizenship Act* 1948 came into force on Australia Day, 26 January 1949, and repealed all previous Commonwealth legislation on this subject. The most significant effect of the Act was the creation for the first time of the status of 'Australian Citizen'. In this respect the Act was complementary to citizenship legislation passed or about to be passed by other countries of the Commonwealth of Nations. All Australian citizens, and the citizens of other countries of the Commonwealth of Nations are declared to be British subjects.

Nationality of Persons Naturalised, South Australia

Nationality	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
Austrian	24	28	31	114	127	221	112	89	107	95
Czechoslovakian ..	200	137	63	32	20	50	22	11	28	27
Dutch	421	676	603	643	440	907	578	607	836	696
Estonian	216	137	61	48	16	35	8	12	16	16
German	470	655	901	1,244	737	1,094	519	442	614	554
Greek	112	180	311	804	555	882	481	636	472	556
Hungarian	365	183	91	99	66	348	243	154	164	158
Italian	934	1,462	1,282	1,365	1,033	1,574	886	729	986	1,287
Latvian	712	449	291	190	84	133	47	44	50	51
Lithuanian	394	291	137	74	65	54	24	25	28	14
Polish	1,470	1,539	845	513	303	424	279	172	304	355
Russian	84	84	32	23	16	39	51	30	53	72
Ukrainian	730	552	318	193	86	127	89	56	44	67
Yugoslavian	565	454	287	237	181	279	243	233	340	390
Stateless	155	71	49	66	34	63	34	50	61	27
Other	177	199	130	150	83	233	133	165	186	171
Total	7,029	7,097	5,432	5,795	3,846	6,463	3,749	3,455	4,289	4,536

There were 3,623 naturalisation certificates granted in 1965 and 3,938 in 1966. Each certificate covers the person being naturalised and his/her children under the *Nationality and Citizenship Act 1948-1967*.

5.5 CHARACTERISTICS OF THE POPULATION

Statistics relating to characteristics of the population of South Australia are derived from information obtained at each population census. At the 1966 Census, these characteristics included the sex distribution, age distribution and the marital status of the population. Information was also obtained on the country of birth, period of residence, nationality, religion, educational attainment, occupational status, industry and occupation of the population. All figures in this section refer to the population exclusive of full-blood Aborigines. The figures of the 1966 Census in the following tables are preliminary and subject to minor amendment.

Sex Distribution

The masculinity of the population of South Australia, *i.e.* the number of males to each 100 females at each census is shown below.

Census Year	Masculinity	Census Year	Masculinity
1844	126.1	1891	105.6
1846	130.4	1901	101.5
1851	124.3	1911	103.1
1855	103.8	1921	100.6
1861	105.3	1933	100.3
1866	109.2	1947	98.2
1871	105.6	1954	102.7
1876	107.0	1961	102.3
1881	111.4	1966	101.0

The masculinity in 1966 for the whole of Australia was 101.4.

At each Census except 1947 the State's masculinity was greater than 100, i.e. there were more males than females in South Australia. The lower rate at the 1947 Census was due in part to the loss of male lives in the 1939-45 War, while the subsequent increase can be attributed mainly to the predominantly male migration inflow of the early post-war period. This is shown very clearly in the following table which gives masculinity in five-yearly age groups at the five censuses 1933 to 1966. Masculinity of the 20-24 and 25-29 age groups fell considerably between 1933 and 1947, but then rose to such an extent that by 1954 it was higher in these age groups than in any other age group.

Masculinity of Population According to Age, South Australia

Censuses 1933 to 1966

Age Last Birthday (Years)	1933	1947	1954	1961	1966
0-4	104.78	104.30	104.46	103.21	105.70
5-9	102.80	106.18	104.85	104.98	104.00
10-14	102.96	104.60	105.38	105.75	105.26
15-19	103.47	100.43	105.27	105.55	104.66
20-24	102.09	95.29	113.81	109.21	102.97
25-29	106.25	96.70	111.99	110.23	104.00
30-34	102.72	99.26	106.65	110.78	105.49
35-39	93.22	101.27	105.80	105.31	108.17
40-44	97.30	107.23	107.05	104.86	104.39
45-49	100.23	99.93	110.99	107.65	104.40
50-54	99.04	89.83	104.54	106.49	104.40
55-59	98.02	96.52	91.53	105.42	101.81
60-64	96.43	93.65	87.94	88.90	97.59
65-69	89.36	88.05	87.80	77.48	80.31
70-74	90.34	83.07	81.72	78.01	68.31
75-79	94.58	77.76	73.53	71.88	68.97
80-84	82.90	70.90	66.71	62.44	60.22
85-89	70.12	65.19	62.38	59.06	52.04
90 and over	63.95	56.17	53.08	40.60	41.19
All ages.....	100.34	98.16	102.72	102.32	101.00

The higher male birth rate is responsible for the larger number of males in the younger age groups whilst the higher male death rate is reflected in the very low masculinity ratios of the older age groups.

Age Distribution

Details of the age distribution of the population are of particular importance as, apart from revealing changes which have occurred in the age structure from one census to the next, they also supply basic material for the calculation of fertility rates, morbidity rates, probabilities of survival and annuity rates.

Age distribution of the population at the 1961 and 1966 Censuses is given in the following table. During the five-year period the population (excluding full-blood Aborigines), increased by 122,535 persons (12.6 per cent) of whom

59,996 were under twenty-one years of age. Population in the age groups 15-19 years increased by 38.5 per cent while that in the age groups 30-34 fell by 7.6 per cent.

The movement in these two age groups are in part due to the post 1939-45 War birth rate increase and the low birth rates of the depression years of the early 1930s respectively.

Age Distribution^(a) of Population, South Australia

Censuses 1961 and 1966

Age Last Birthday (Years)	30 June 1961			30 June 1966			Increase Persons
	Males	Females	Persons	Males	Females	Persons	
0-4	52,311	50,682	102,993	55,233	52,255	107,488	4,495
5-9	50,927	48,509	99,436	57,933	55,704	113,637	14,201
10-14	50,884	48,119	99,003	55,045	52,295	107,340	8,337
15-19	38,276	36,265	74,541	52,779	50,428	103,207	28,666
20-24	31,538	28,879	60,417	39,564	38,424	77,988	17,571
25-29	29,600	26,852	56,452	33,684	32,388	66,072	9,620
30-34	35,328	31,891	67,219	31,879	30,219	62,098	(-) 5,121
35-39	37,175	35,300	72,475	37,644	34,800	72,444	(-) 31
40-44	32,746	31,229	63,975	38,248	36,640	74,888	10,913
45-49	31,959	29,687	61,646	33,167	31,769	64,936	3,290
50-54	26,240	24,641	50,881	30,973	29,669	60,642	9,761
55-59	20,934	19,857	40,791	24,961	24,517	49,478	8,687
60-64	16,305	18,340	34,645	19,221	19,696	38,917	4,272
65-69	13,497	17,419	30,916	14,023	17,461	31,484	568
70-74	11,003	14,104	25,107	10,633	15,565	26,198	1,091
75-79	6,854	9,535	16,389	7,761	11,253	19,014	2,625
80-84	3,185	5,101	8,286	3,988	6,622	10,610	2,324
85-89	1,167	1,976	3,143	1,413	2,715	4,128	985
90 and over	296	729	1,025	381	925	1,306	281
Total	490,225	479,115	969,340	548,530	543,345	1,091,875	122,535

(a) Adjusted for age not stated.

The next table shows that the proportion of the population under fifteen years of age fell markedly between 1901 and 1947; rose significantly between 1947 and 1961 but fell slightly between 1961 and 1966. The proportion fifteen years and under sixty-five years showed an upward trend to 1947, but has since maintained a fairly stable level of approximately 61 per cent. The proportion of the population sixty-five years and over continued to rise over the period 1901 to 1954, but since 1954 it has fallen slightly.

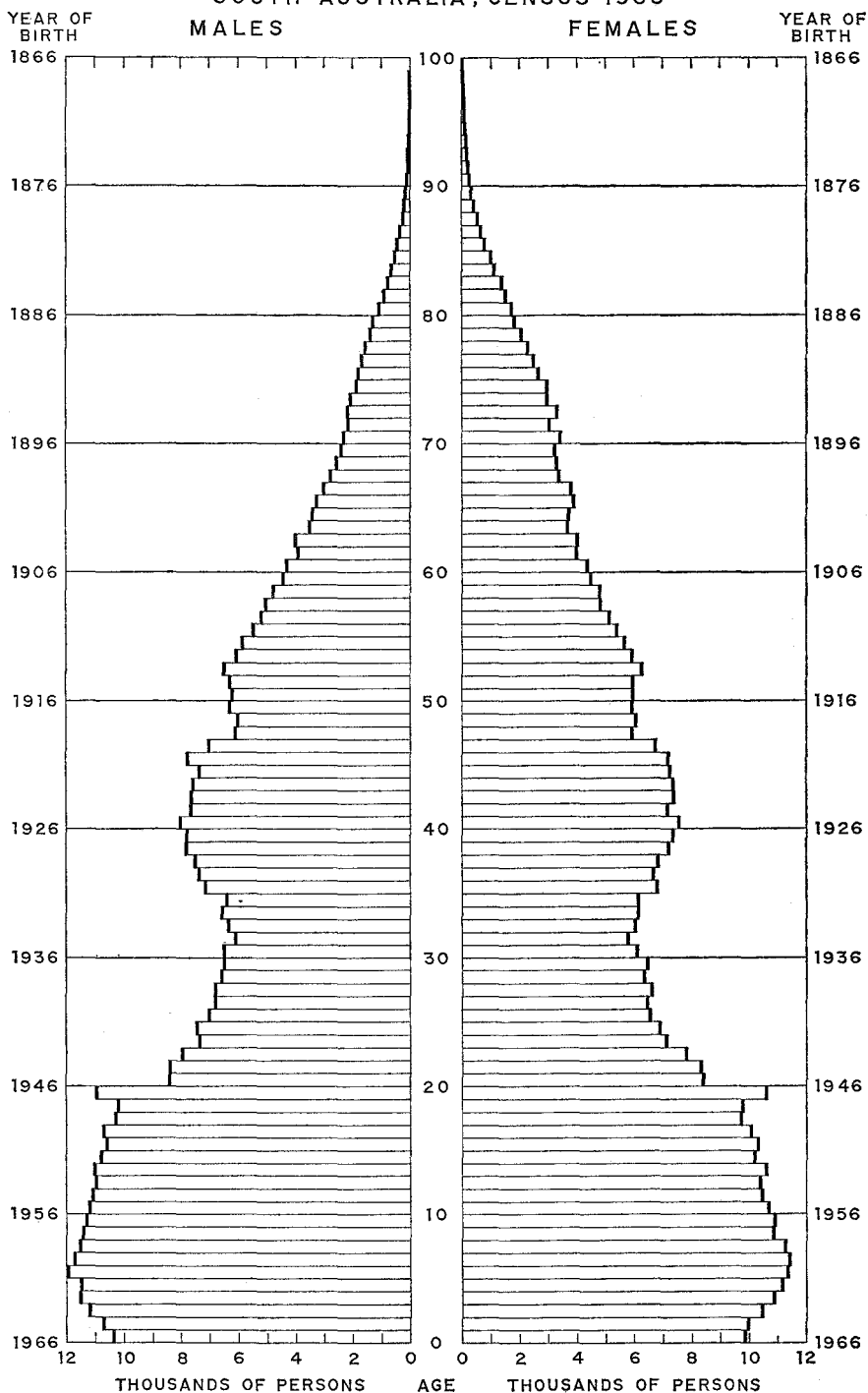
Proportional Age Distribution of Population, South Australia

Censuses 1901 to 1966

Census	Males			Females			Persons		
	Under 15 Years	15 Years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over
	Per Cent								
1901....	36.0	60.0	4.0	35.9	59.8	4.3	35.9	59.9	4.2
1911....	31.1	64.4	4.5	31.3	63.8	4.9	31.2	64.1	4.7
1921....	32.2	62.8	5.0	31.3	63.5	5.2	31.7	63.2	5.1
1933....	26.8	66.6	6.6	26.0	66.6	7.4	26.4	66.6	7.0
1947....	25.1	67.0	7.9	23.5	67.0	9.5	24.3	67.0	8.7
1954....	29.2	62.9	7.9	28.6	61.3	10.1	28.9	62.1	9.0
1961....	31.4	61.2	7.4	30.7	59.1	10.2	31.1	60.1	8.8
1966....	30.7	62.4	7.0	29.5	60.5	10.0	30.1	61.4	8.5

AGE DISTRIBUTION OF THE POPULATION

SOUTH AUSTRALIA, CENSUS 1966



The mean or average age of the population of South Australia (excluding full-blood Aborigines) at the Census of 1954 was 32.2 years (males 31.5 and females 32.9); in 1961 it was 31.3 years (males 30.6 and females 32.1), and by 1966 it had fallen further to 30.8 years (males 30.4 and females 31.2).

Marital Status

The marital status of the population was ascertained at the 1961 and 1966 Censuses, when persons were asked to state whether they were never married, married, married but permanently separated (legally or otherwise), widowed, or divorced.

In 1966, the number of persons who stated that they were never married represented 47.7 per cent of the total population, approximately the same proportion as in 1961. Married persons in 1966 represented 45.6 per cent of the total compared with 45.8 per cent in 1961.

Marital Status of Population, South Australia

Censuses 1961 and 1966

Marital Status	30 June 1961				30 June 1966			
	Males		Females		Males		Females	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Never married:								
Under 15 years of age	154,122	31.44	147,310	30.74	168,211	30.67	160,254	29.50
15 years of age and over ...	93,927	19.16	66,055	13.79	110,592	20.16	81,731	15.04
Total	248,049	50.60	213,365	44.53	278,803	50.83	241,985	44.54
Married	223,321	45.56	220,579	46.04	249,048	45.40	248,731	45.78
Married but permanently separated ..	5,049	1.03	5,540	1.16	5,478	1.00	6,201	1.14
Widowed	10,303	2.10	35,974	7.51	10,964	2.00	41,577	7.65
Divorced	3,503	0.71	3,657	0.76	4,237	0.77	4,851	0.89
Grand total	490,225	100.00	479,115	100.00	548,530	100.00	543,345	100.00

NOTE : Marital status was allocated prior to tabulation where this information was not stated on the Census Schedule.

At the 1961 Census 77.7 per cent of widowed persons were female and this proportion had increased to 79.1 per cent in 1966. The disparity between the number of widowed males and widowed females is the result of the greater longevity of females coupled with the usually younger age at marriage and the greater proportion of widowed males who remarry.

Period of Residence in Australia

The post-war migration flow into Australia is shown by the numbers of persons who have taken up residence in Australia since the late 1940s. The following table gives details of period of residence of such persons residing in South Australia at the 1961 and 1966 Censuses.

Period of Residence in Australia of Persons Residing in South Australia
Censuses 1961 and 1966

	30 June 1961			30 June 1966			Increase
	Males	Females	Persons	Males	Females	Persons	Persons
Under 1 year	8,859	6,381	15,240	12,235	11,062	23,297	8,057
1 year and under 2	6,678	5,662	12,340	10,332	9,742	20,074	7,734
2 years and under 3	6,522	6,388	12,910	8,834	8,262	17,096	4,186
3 years and under 4	4,321	5,178	9,499	5,961	5,757	11,718	2,219
4 years and under 5	4,969	5,212	10,181	4,349	4,441	8,790	-1,391
5 years and over	69,955	52,639	122,594	87,919	73,586	161,505	38,911
Not stated	2,236	1,112	3,348	1,935	1,533	3,468	120
Born outside Australia	103,540	82,572	186,112	131,565	114,383	245,948	59,836
Born in Australia	386,685	396,543	783,228	416,965	428,962	845,927	62,699
Total population	490,225	479,115	969,340	548,530	543,345	1,091,875	122,535

In 1947 there were 43,552 persons residing in South Australia who were not born in Australia and only about 5 per cent of these had lived in Australia for less than five years. By 1954 the number of such persons had risen to 110,605, of whom 51 per cent had resided in Australia for less than 5 years. By 1966 the number had further increased to 245,948, but the proportion of these who had lived in Australia for less than five years had fallen to 33 per cent.

Country of Birth

At the first census conducted by the Commonwealth in 1911, people of Australia were asked to state their place of birth. The Australian-born content of the population in South Australia was 85.7 per cent in 1911, 88.3 per cent in 1921, 90.3 per cent in 1933, and 93.3 per cent in 1947. Overseas migration had lowered the proportion of Australian-born persons to 86.1 per cent by 1954, whilst in 1966 the proportion was down to 77.5 per cent. The proportion of the population born in the United Kingdom, including the Republic of Ireland, fell from 11.0 per cent in 1911 to 5.1 per cent in 1947 and rose to 11.2 per cent in 1966.

Country of Birth of Population, South Australia

Censuses 1961 and 1966

Country of Birth	30 June 1961			30 June 1966			Increase
	Males	Females	Persons	Males	Females	Persons	Persons
Australia	386,685	396,543	783,228	416,965	428,962	845,927	62,699
New Zealand	936	890	1,826	1,080	1,108	2,188	362
Europe							
United Kingdom and Republic of Ireland	41,684	37,102	78,786	62,756	59,274	122,030	43,244
Germany	8,345	7,662	16,007	8,189	8,024	16,213	206
Greece	5,341	4,187	9,528	7,834	6,826	14,660	5,132
Italy	15,446	10,784	26,230	17,130	13,718	30,848	4,618
Malta	1,030	732	1,762	1,276	982	2,258	496
Netherlands	6,781	5,758	12,539	6,703	5,740	12,443	—
Poland	4,471	2,468	6,939	4,519	2,734	7,253	314
Other	14,686	9,415	24,101	15,855	10,845	26,700	2,599
Total Europe	97,784	78,108	175,892	124,262	108,143	232,405	56,513
Other countries	4,820	3,574	8,394	6,223	5,132	11,355	2,961
Total born outside Australia	103,540	82,572	186,112	131,565	114,383	245,948	59,836
Total	490,225	479,115	969,340	548,530	543,345	1,091,875	122,535

Of persons born in Europe, the greatest numerical and proportionate increase between 1961 and 1966 was in persons born in the United Kingdom, including the Republic of Ireland, (43,244 persons, 54.9 per cent). An almost similar proportionate increase (53.9 per cent) was recorded for persons born in Greece. The percentage increase over the period 1961 to 1966 of persons born in Germany, Italy and the Netherlands was much less than for the period 1954 to 1961.

Nationality

The nationality (or country of allegiance) of the population of South Australia at June 1961 and 1966 is given in the following table. For purposes of this table, Irish nationality is included with British. Decreases in the number of persons of most nationalities in 1966 are due in part to British naturalisation of former aliens.

Nationality (i.e. Allegiance) of Population, South Australia
Censuses 1961 and 1966

Nationality	30th June 1961			30th June 1966			Increase Persons
	Males	Females	Persons	Males	Females	Persons	
British (a):							
Born in Australia	386,685	396,543	783,228	416,965	428,962	845,927	62,699
Born outside Australia ...	71,059	57,413	128,472	103,460	90,495	193,955	65,483
Total British	457,744	453,956	911,700	520,425	519,457	1,039,882	128,182
Foreign:							
Dutch	5,216	4,678	9,894	3,548	3,129	6,677	(-) 3,217
German	4,537	3,753	8,290	3,085	2,597	5,682	(-) 2,608
Greek	3,767	3,297	7,064	4,994	4,869	9,863	2,799
Hungarian	699	476	1,175	304	216	520	(-) 655
Italian	9,928	7,935	17,863	9,224	8,538	17,762	(-) 101
Latvian, Lithuanian and Estonian	547	332	879	243	148	391	(-) 488
Polish	1,465	926	2,391	934	677	1,611	(-) 780
Yugoslavian	1,456	857	2,313	1,566	926	2,492	179
Other (including Stateless) ..	4,866	2,905	7,771	4,207	2,788	6,995	(-) 776
Total foreign	32,481	25,159	57,640	28,105	23,888	51,993	(-) 5,647
Total	490,225	479,115	969,340	548,530	543,345	1,091,875	122,535

(a) Includes Irish.

Persons of British nationality represented 99.7 per cent of the State population in 1947, but this proportion had fallen to 95.2 per cent by 1966.

Religion

Information on the religious affiliations of the population is obtained only at population censuses. There is, however, no legal obligation to answer the question on religion and at the 1966 Census respondents representing approximately 10 per cent of the South Australia population chose not to do so.

The Church of England has always had the greatest number of adherents, its relative importance having been fairly consistent since 1866 when it accounted for 31.8 per cent of answers compared with 29.1 per cent in 1966.

Changes in the pattern of religious affiliations appear to some extent attributable to migratory movements. This is particularly noticeable in the case of Catholics (i.e. persons described as either Catholics or Roman Catholics) who accounted for only 14.3 per cent of the answers in 1933 compared with 22.5 per cent in 1966, thus reflecting the pattern of post-war migration.

Religions of Population, Censuses 1961 and 1966, South Australia

Religion	30 June 1961			30 June 1966			Increase Per Cent
	Males	Females	Persons	Males	Females	Persons	
Christian:							
Baptist	9,830	11,010	20,840	10,342	11,893	22,235	6.7
Brethren	250	293	543	270	272	542	-0.2
Catholic, Roman (a)	32,821	26,799	59,620	40,016	34,952	74,968	25.7
Catholic (a)	61,707	61,708	123,415	72,153	73,455	145,608	18.0
Churches of Christ	11,328	12,569	23,897	11,884	13,460	25,344	6.1
Church of England	126,918	128,135	255,053	141,408	144,746	286,154	12.2
Congregational	8,442	9,425	17,867	8,561	9,727	18,288	2.4
Lutheran	27,252	26,695	53,947	29,487	29,794	59,281	9.9
Methodist	106,679	110,090	216,769	110,976	116,507	227,483	4.9
Orthodox	10,294	8,350	18,644	14,852	12,901	27,753	48.9
Presbyterian	19,212	18,891	38,103	21,286	21,401	42,687	12.0
Salvation Army	3,161	3,280	6,441	3,542	3,762	7,304	13.4
Seventh Day Adventist	1,173	1,384	2,557	1,339	1,660	2,999	17.3
Protestant (undefined)	5,892	5,595	11,487	6,556	6,420	12,976	13.0
Other (including Christian undefined)	4,667	5,050	9,717	6,863	7,456	14,319	47.4
Total Christian ..	429,626	429,274	858,900	479,535	488,406	967,941	12.7
Non-Christian:							
Hebrew	486	499	985	622	627	1,249	26.8
Other	695	307	1,002	678	413	1,091	8.9
Total Non-Christian ..	1,181	806	1,987	1,300	1,040	2,340	17.8
Indefinite	1,433	1,181	2,614	1,908	1,593	3,501	33.9
No Religion	2,138	1,096	3,234	5,379	2,993	8,372	158.9
No reply	55,847	46,758	102,605	60,408	49,313	109,721	6.9
Total	490,225	479,115	969,340	548,530	543,345	1,091,875	12.6

(a) So described in individual census schedules.

Educational Attainment

At the 1966 Census information was sought for the first time on the highest level of education attained by all persons. The following table summarises the details obtained for South Australia.

Educational Attainment of Population, South Australia
Census 1966

Highest Level of Education Attained	Males	Females	Persons	Percentage Distribution		
				Males	Females	Persons
Tertiary:						
University degree	7,632	2,060	9,692	1.39	0.38	0.89
Other tertiary qualifications	10,907	7,392	18,299	1.99	1.36	1.68
Secondary:						
Passed at Leaving or Leaving Honours level	41,373	32,148	73,521	7.54	5.92	6.73
Passed at Intermediate level	69,281	73,387	142,668	12.63	13.51	13.07
Attended secondary school (a)	130,811	131,190	262,001	23.85	24.14	24.00
Primary:						
Attended primary school (b)	221,516	232,459	453,975	40.38	42.78	41.58
No schooling	60,221	57,605	117,826	10.98	10.60	10.79
Not stated	6,789	7,104	13,893	1.24	1.31	1.27
Total	548,530	543,345	1,091,875	100.00	100.00	100.00

(a) Passed no examination at intermediate level or above.

(b) Or passed final primary examinations.

Other Characteristics

Some census details of occupation, occupational status and industry are set out in Part 7.1.

PART 6

SOCIAL ENVIRONMENT

6.1 LAW, ORDER AND PUBLIC SAFETY

LAW AND ADMINISTRATION

The law in force in South Australia consists of:

- (i) So much of the common law of England and such English Statute law as came into force on the original settlement of the colony in 1836;
- (ii) Acts passed by the Parliament of the State of South Australia, together with regulations, rules, orders, etc. made thereunder;
- (iii) Acts passed by the Parliament of the Commonwealth of Australia within the scope of its allotted powers, together with regulations, rules, orders, etc. made thereunder;
- (iv) Imperial law binding South Australia as part of the British Commonwealth, as part of the Commonwealth of Australia or as a State—subject, since 1931, to the Statute of Westminster. (This relates mainly to external affairs or matters of Imperial concern);
- (v) Case law. (This consists of judicial decisions of the English, Commonwealth, or State Courts, respectively, and represents an important part of the law in force in South Australia.)

The scope of Commonwealth legislation is limited to the subjects specified in the Commonwealth Constitution. In some cases Commonwealth powers of legislation are exclusive of, in others concurrent with, those of the State. In all cases of conflict, valid Commonwealth laws override State laws.

LEGAL PROFESSION

Legal practitioners in South Australia are admitted to the Bar, after the prescribed academic training and service in articles, as barristers, solicitors, attorneys and proctors. This means that the legal profession is not divided, as it is in the eastern States. A practitioner is entitled to pursue any one or more of the four callings.

The legal profession is controlled by the Legal Practitioners Act, 1936-1964. Rules of Court prescribe the conditions of entry to the profession, regulate articles of clerkship and specify the legal examinations which must be passed before admission to practice. Women are eligible for admission. A practitioner duly admitted to practice has the right of audience in all courts of South Australia. The Act provides for the hearing of charges of unprofessional conduct by the statutory committee of the Law Society and for its report to be referred to the Supreme Court which may make any order it thinks fit.

In 1967 there were 402 legal practitioners actually practising in the State; of these 354 were practising in the City of Adelaide.

LEGAL DEPARTMENT

In South Australia the Attorney-General is a Minister of State Parliament. There is a Crown Solicitor who, under the Attorney-General, acts as legal adviser to the Government.

The Attorney-General is charged with the conduct of business relating to the Supreme Court, the officers of the Crown Solicitor's Department (which includes the Crown Prosecutor), the Parliamentary Draftsman and court reporters as well as Statute Law consolidation and certain Acts, including the Criminal Law Consolidation Act. He also advises Ministers on questions on which his legal opinion is required, initiates and defends proceedings by and against the State and determines whether informations should be laid in cases of indictable offences.

The Attorney-General supervises the working of inferior courts and the operations of the various officers connected with the Supreme Court. He administers Acts of Parliament relating to justices, coroners, lands titles, registration of firms, companies and deeds, licensing and the Electoral Department.

SUPREME COURT

The various jurisdictions of the Court are civil, criminal, matrimonial causes and testamentary causes.

Judges of the Supreme Court are appointed by commission of the Governor on the advice of the Executive Council. A person may not be appointed a judge of the Supreme Court unless he is a legal practitioner of ten years standing.

The Supreme Court Act, 1935-1967, provides *inter alia* for the constitution, jurisdiction, powers and duties, of the Supreme Court and its judges. One of the powers of particular importance of the judges of the Court is that of making Rules of Court regulating the procedure of the Court. In particular the Rules, which are published in the *Government Gazette*, may regulate the admission to practice of practitioners of the Supreme Court and control their conduct.

There are at present seven judges of the Supreme Court, comprising the Chief Justice and six puisne judges. A judge holds office until the age of seventy years at a salary fixed by Statute. The Court sits in Adelaide, but holds circuit sessions three times each year at Port Augusta and Mount Gambier.

On 28 February 1967 Doctor J. J. Bray Q.C. was appointed as Chief Justice to succeed the Honourable Sir J. Mellis Napier, K.C.M.G., LL.D., who retired after serving a record term of forty-three years on the Supreme Court Bench, twenty-five of these years as Chief Justice.

Civil and Criminal Jurisdiction

Generally speaking, the Supreme Court has unlimited civil and criminal jurisdiction, limited only in respect of matters which are reserved for the original jurisdiction of Federal Courts. English practice applies where no contrary provisions exist in the State's Statute law.

Crimes and misdemeanours prosecuted by indictment in the Supreme Court must be tried before a jury of twelve persons who find as to the facts of the case; the punishment being determined by the judge. Capital punishment applies in the case of murder, treason and certain offences under the Commonwealth *Crimes Act* 1914-1966, and *Crimes (Aircraft) Act* 1963.

The Court has original jurisdiction over all litigious matters arising in the State except where its jurisdiction is excluded by Statute. Its original jurisdiction is usually exercised by one judge although it is possible in theory to try a civil issue with a jury.

The money value of judgments entered during 1967 either on liquidated claims or claims for unspecified damages was \$1,415,072.

The Court also has power at common law to restrain inferior courts acting in excess of their jurisdiction and may, by order, compel them to enforce a legal right. The Court also acts as a court of appeal from inferior courts. During 1967, the Supreme Court heard 121 appeals from inferior courts. Of these 64 were dismissed, 42 were allowed, 4 were withdrawn, one was referred to the Full Court, 8 were remitted for rehearing and 2 were remitted because they were not properly instituted.

In proper cases, appeals may be carried from decisions of the Supreme Court to the High Court of Australia, or to the Privy Council.

The following table gives details of persons tried, convicted, and executed for the years 1958 to 1967. In the post-war period to the end of 1967 a total of twenty-six persons have been sentenced to death in South Australia, twenty of these sentences being subsequently commuted. No female has been executed in the State since 1873.

Supreme and Circuit Courts: Trials, Convictions and Executions, South Australia

Year	Tried		Convicted		Executed Males
	Males	Females	Males	Females	
1958.....	480	24	438	19	1
1959.....	528	17	482	17	—
1960.....	590	27	557	23	—
1961.....	622	17	591	15	—
1962.....	743	24	697	21	—
1963.....	737	35	716	29	—
1964.....	650	21	608	21	1
1965.....	707	28	687	26	—
1966.....	751	19	720	18	—
1967.....	706	38	674	33	—

Details of convictions classified by type of offence are set out in the following table.

Supreme and Circuit Courts: Persons Convicted^(a), South Australia

Type of Offence	1963	1964	1965	1966	1967
Offences against the person:					
Murder and attempted murder	2	3	1	2	3
Other acts causing death, injury or endangering life	32	39	34	28	28
Offences against females	182	142	193	189	170
Unnatural offences	33	39	22	22	16
Other offences against the person	12	11	26	9	8
Total	261	234	276	250	225
Offences against property:					
Robbery	10	8	23	8	14
Breaking and entering and burglary	274	214	270	312	358
Embezzlement and stealing by servants ...	18	8	9	16	7
Fraud and false pretences	31	23	28	24	19
Other offences against property	45	46	32	52	24
Total	378	299	362	412	422
Other offences:					
Forgery and offences against the currency .	30	29	20	27	21
Breach of recognisance	24	25	14	19	13
Other	52	42	41	30	26
Total	106	96	75	76	60
Grand total	745	629	713	738	707

(a) In the case of multiple charges, where more than one conviction is recorded, the most serious offence is counted.

Matrimonial Causes Jurisdiction

As in other States, the Supreme Court exercises jurisdiction in matrimonial causes pursuant to the Commonwealth *Matrimonial Causes Act* 1959-1966. The Act superseded the existing State law, making many important changes in the practice and procedure of the Supreme Court in matrimonial causes.

'Matrimonial cause' normally refers to proceedings for a decree of dissolution of marriage; however, the Court also hears proceedings for a decree of nullity of marriage, judicial separation or restitution of conjugal rights.

The jurisdiction of the Supreme Court is co-extensive with the Supreme Courts of the other States; there is no requirement that either or both parties shall be domiciled or resident within the territorial boundaries of the jurisdiction of the court. However, the Court will transfer to the most convenient court any suit for which it considers itself not to be the appropriate court.

Proceedings for a decree of dissolution of marriage, or of nullity of a voidable marriage, can be instituted only by a person domiciled in Australia; while proceedings for a decree of nullity of a void marriage can be instituted by a person domiciled or resident in Australia. The grounds upon which a petition for dissolution of marriage may be granted are set out in Section 28 of the Act, the most common being desertion for two years, adultery, separation for five years, and habitual cruelty. Details of divorces granted and the grounds for divorce are shown in Part 6.8.

At the same time as the proceedings for principal relief, the Court may hear a claim for permanent maintenance and also a claim for custody of children. The powers of the Court in proceedings with respect to the custody, guardianship, welfare, advancement or education of children of the marriage are dealt with in Section 85 which provides that the Court shall regard the interests of the children as the paramount consideration but, subject to that, may make such order as it thinks proper. The Court also has wide powers in respect of the settlement of property.

Testamentary Causes Jurisdiction

The Supreme Court in its testamentary causes jurisdiction is the only authority competent to grant probate of the will, or administration of the estate, of any deceased person who leaves real or personal property in the State. Pending a grant of probate or administration, all property of the deceased person is vested in the Public Trustee, and with a few exceptions, the property cannot be dealt with in any way until a grant has been obtained. The Court will not issue a grant until death duty has been paid.

The powers of the Court are exercised by a judge, the Master and the Registrar or Deputy Registrar of Probates. The latter deal with all applications for probate and administration where there is no contention and any matters prescribed by the rules. In cases of doubt or difficulty, the Registrar refers the matter to a Judge in Chambers. The records of the Court are available for public inspection, and copies of wills and other documents may be obtained.

Some statistics of the estates of deceased persons appear on pages 569-70.

LOCAL COURTS

Local courts were first established in South Australia by an ordinance of 1850 and originally had criminal as well as civil jurisdiction.

The Local Courts Act, 1926, effected important alterations in the structure and jurisdiction of local courts by abolishing juries in local courts and also justices as constituent members of courts of full jurisdiction (except on the application of a party), by conferring equitable jurisdiction on the Local Court of Adelaide of Full Jurisdiction, and by giving a full appeal to the Supreme Court on facts as well as on law from all judgments, determinations, and orders of local courts in actions involving over \$60.

Local courts are now established under the Local Courts Act, 1926-1965, and have only civil jurisdiction. They are located in Adelaide and the main country towns, and have jurisdiction in common law claims up to a limit of \$2,500. The Local Court of Adelaide has certain equitable jurisdiction as set out in the Local Courts Act. In addition the Local Court of Adelaide and a number of specified local courts (*e.g.* Port Adelaide, Port Pirie, Mount Gambier and others) exercise jurisdiction under certain other Acts, the principal of which is the Workmen's Compensation Act.

Claims under \$60 may be heard by a Local Court of Limited Jurisdiction, that is, a local court constituted by two justices of the peace. Claims for a greater amount must be heard by a special magistrate or, in the Local Court of Adelaide, may be heard by the Local Court Judge.

Under Section 28 of the Local Courts Act the Local Court Judge may make Rules of Court for carrying the Act or any other Act conferring jurisdiction upon local courts into effect.

Local Courts: Summary of Transactions, South Australia

Year	Total Claims		Verdicts and Judgments						Service and Execution of Process Act		
	Sum-moneses Issued (a)	Amount Sued For	Verdicts by Trial		Judgment by Default		Total		Sum-moneses for Service out of Jurisdiction	Certificates	
			Number	Amount	Number	Amount	Number	Amount		To Other States	From Other States
		\$'000		\$'000		\$'000		\$'000			
1962.....	94,566	7,679	1,370	372	46,287	3,760	47,657	4,132	2,728	1,088	230
1963.....	97,038	7,341	1,232	365	46,569	3,719	47,801	4,084	2,617	1,095	266
1964.....	103,218	8,049	1,407	336	53,679	3,933	55,086	4,269	2,487	1,237	269
1965.....	104,297	8,709	1,550	374	45,281	3,219	46,831	3,594	2,214	904	267
1966.....	99,601	8,827	1,372	343	50,189	4,157	51,561	4,500	2,580	1,231	288

(a) Including those withdrawn or settled out of Court.

COURTS OF SUMMARY JURISDICTION

Courts of summary jurisdiction are established in all major towns and hear all criminal cases where the penalty prescribed is imprisonment for two years or less. Their procedure is regulated by the Justices Act, 1921-1960. They are presided over either by a special magistrate or by two justices of the peace, with the more serious causes generally being heard by a special magistrate.

Special magistrates are appointed under the Justices Act, and each appointment must be approved by the Chief Justice. In practice appointees are required to be practitioners of the Supreme Court who have been practising for some years.

Courts of Summary Jurisdiction (Magistrates Courts), South Australia
Persons Convicted, Including Juveniles^(a)

Offence	1962-63	1963-64	1964-65	1965-66	1966-67
Against the person	310	355	334	301	347
Against property:					
Burglary and housebreaking ..	471	431	576	696	659
Larceny (various)	1,675	1,941	2,479	2,501	2,653
Other	1,008	1,179	1,254	1,369	1,304
Against morality	360	342	258	313	346
Against good order:					
Drunkenness	7,485	6,952	7,110	7,334	6,109
Unlawfully on premises	386	347	409	460	427
Vagrancy	414	378	435	548	470
Other	939	1,147	1,584	1,803	1,819
Other, relating to:					
Road Traffic and Motor Vehicles Acts	31,840	27,645	34,165	40,968	55,567
Licensing	1,610	1,018	788	795	848
Social Welfare	1,545	1,918	2,132	1,760	1,799
Police Act	1,176	946	831	1,008	1,091
Local government	4,150	5,101	4,647	5,833	5,235
Australian Broadcasting Act ..	1,012	2,284	1,773	2,317	3,818
Income tax assessment	824	811	523	551	603
Other	2,319	3,011	3,314	3,447	4,356
Total persons convicted:					
Males	54,846	52,739	59,219	67,456	81,111
Females	2,678	3,067	3,393	4,548	6,340
Total	57,524	55,806	62,612	72,004	87,451

(a) Where multiple charges have been laid against one individual at the same time each type of offence has been counted separately.

Offences under The Road Traffic and Motor Vehicles Acts accounted for 64 per cent of total convictions in 1966-67. This compares with 53 per cent in 1958-59, 50 per cent in 1954-55 and 42 per cent in 1950-51.

Of the 6,340 females convicted in 1966-67, 3,176 were convicted of offences under the Road Traffic and Motor Vehicles Acts, 237 under the Social Welfare Act, 483 under laws relating to local government (largely city parking offences), and 504 were convicted of various forms of larceny.

JUVENILE COURTS

Juvenile courts for the trial of juvenile offenders *i.e.* persons under eighteen years of age are presided over by a special magistrate or two justices of the peace who are approved as suitable to exercise this jurisdiction. The courts may try any offence (except homicide) committed by a juvenile. The penalties that may be imposed are a fine, a bond with or without supervision, or committal to the custody and control of the Minister of Social Welfare or committal to a training school. Juvenile courts also exercise jurisdiction over destitute, neglected or uncontrolled children and may commit such children to a childrens home. The principles upon which a juvenile court must act in making orders in respect of these latter are set out in Section 44 of the Juvenile Courts Act, 1965-1966, which reads in part as follows:

'Before making an order under this section committing a child to an institution, the Court shall have regard to the welfare of the child and the desirability or otherwise of removing him from unsuitable surroundings and making proper provision for his care, training and control.'

Juveniles Convicted^(a), South Australia

Offences	1962-63	1963-64	1964-65	1965-66	1966-67
Against the person	35	42	44	37	53
Against property:					
Burglary and housebreaking ..	450	420	576	639	620
Larceny (various)	681	759	1,099	1,061	1,673
Other	255	334	447	343	345
Against morality	186	166	137	180	144
Against good order:					
Unlawfully on premises	132	83	123	116	118
Other	160	233	315	341	380
Other:					
Road Traffic and Motor Vehicles Acts	888	1,012	1,853	2,590	2,939
Social Welfare	335	398	374	310	341
Police Act	169	195	208	157	188
Other	253	388	272	266	224
Total juveniles convicted:					
Males	3,160	3,647	4,937	5,589	6,506
Females	384	383	511	451	519
Total	3,544	4,030	5,448	6,040	7,025

(a) Under 18 years. Includes both police and private cases.

The 519 females convicted in 1966-67 included 208 charged under the Social Welfare Act; *i.e.* they were girls found to be neglected, destitute or uncontrolled.

THE LICENSING COURT

The licensing of hotels, and liquor licences for storekeepers, restaurants and clubs is governed by the Licensing Act 1967 which repealed the Licensing Act, 1932-1966. The previous Act provided that a local option poll was necessary before a new licence could be granted. At the hearing of an application a memorial by resident electors could be presented against the application and the Court was required to consider various objections which could be raised. As a result of the local option system the number of licences had remained almost unaltered for many years.

In March 1966 a Royal Commission was appointed 'to inquire into and report whether any and what amendments should be made to the law relating to the sale, supply, and consumption of intoxicating liquors and to other matters dealt with by the Licensing Act, 1932-1964 and any other Act relating to intoxicating liquors . . .'

On 1 March 1967 a Bill was introduced into Parliament to give effect to most of the recommendations of the Royal Commissioner including changes in the constitution and powers of the Licensing Court, the abolition of local option polls and the extension of hotel trading hours to 10 p.m. The Bill was passed with a number of amendments in September 1967 and the Act came into force on 28 September 1967.

Under the new Act the Licensing Court consists of a Chairman who has the rank and title of Judge of the Court and a panel of six Licensing Magistrates, one of whom has the title of Deputy Chairman. The more important work of the Court, for example the grant of new licences and the forfeiture and removal of licences, is done by the Full Bench which consists of the Chairman or Deputy Chairman and two Licensing Magistrates. Other matters may be dealt with by a member of the Court sitting alone. Since the local option polls are no longer part of the licensing system the question of whether a licence should be granted is wholly in the hands of the Court. The Act contains some requirements which must be observed before the Court can grant a licence. In addition full opportunity is given for any person to object on a number of grounds to the grant of a licence.

The number of types of licences has been increased to a total of sixteen types; these are:

- | | |
|--|--------------------------|
| (a) Full publican's licence. | (i) Club licence. |
| (b) Limited publican's licence. | (j) Packet licence. |
| (c) Wholesale storekeeper's licence. | (k) Railway licence. |
| (d) Retail storekeeper's licence. | (l) Restaurant licence. |
| (e) Wine licence. | (m) Cabaret licence. |
| (f) Brewer's Australian ale licence. | (n) Theatre licence. |
| (g) Distiller's storekeeper's licence. | (o) Special licence. |
| (h) Vigneron's licence. | (p) Five gallon licence. |

A packet licence covers the sale of liquor to passengers on board steamers or vessels; a special licence may be granted where an application for the renewal of a licence is adjourned, while the limited publican's licence is available to 'premises specifically constructed and primarily used for the service of the itinerant public.' In the case of full publican's, limited publican's, and restaurant licences, liquor may be consumed in the dining area each weekday from 12 noon to 11.30 p.m. and on Sundays between 12 noon and 10.45 p.m. by persons taking *bona fide* meals with or ancillary to such meals.

Fees for licences are paid in accordance with the amount of liquor purchased (or in some cases sold) during the preceding twelve months and at present in the case of the retail licences is calculated on 5 per cent of the amount of purchases.

The new Act authorises the grant of permits of various types as follows:

- (a) A special permit permitting the sale, supply, and consumption of liquor at an entertainment held in licensed premises in circumstances in which the sale, supply, and consumption would otherwise be unlawful.
- (b) Where an entertainment is held on unlicensed premises the person holding the entertainment may obtain a permit authorising the consumption of liquor.
- (c) A permit may be granted to the holder of a full publican's licence authorising him to sell liquor in a booth at various forms of entertainment. Previously these were limited to sporting fixtures, agricultural shows or other similar functions but may now be granted on any day or night including Sunday and as a result can now be granted to operate at dances etc.
- (d) Club permits have been the subject of many applications since the Act was proclaimed. These enable an unlicensed club to keep, sell, or supply liquor for consumption by the members of the club or by one visitor per member at the expense of a member on any day including Sunday. These permits may be granted for any period up to one year.
- (e) The holders of full publican's licences, limited publican's licences, club licences or restaurant licences may obtain a supper permit which authorises the sale of liquor between 10 p.m. and 11.30 p.m. on each day but excluding Sundays, Good Friday and Christmas Day for consumption with or ancillary to substantial food in such part of the licensed premises as is specified and upon such conditions as the Court may fix.
- (f) In view of the growth of entertainment at hotels all licensed premises which are used as a theatre, concert hall or ballroom or otherwise for public entertainment must obtain an entertainment permit. These are granted by the Court having regard to the safety, health, and convenience of members of the public who might attend and contain provisions for safety in the event of fire.

The Act provides for penalties for breaches of the Act and these are dealt with by a Court of Summary Jurisdiction. Convictions for breaches in some circumstances may lead to an order for the forfeiture of a licence.

It will be appreciated that with the grant of licences being restricted for so many years there have been a considerable number of applications for new licences of various types lodged with the Court. Some types of licences and permits which were granted under the old Act will eventually disappear. For example no new wine licence can be granted under the present Act and every wine licence in force may be renewed during a period of five years only and after that only in certain special cases.

The permits previously issued under the old Act to restaurants for the sale and consumption of Australian wines with meals can no longer be issued. The permits existing at the introduction of the new Act may be renewed during the

period of three years after the commencement of the Act but not thereafter. Similarly, Storekeeper's Australian wine licences may be renewed during the period of three years.

The following table shows the number of licences and permits issued to or in force at 1 March 1968.

Licences:

Full publican's	598
Limited publican's	11
Wholesale storekeeper's	27
Retail storekeeper's	29
Wine	11
Brewer's	7
Distiller's storekeeper's	21
Vigneron's	2
Club	43
Packet	2
Railway	1
Restaurant	22
Cabaret	4
Theatre	1
Special	—
Five gallon	—

Permits:

Special licensed premises	1223
Special unlicensed premises	4874
Entertainment	214
Club	555
Booth	1018
Supper	46
Wine in restaurants (old Act)	82

BANKRUPTCY

Since 1928 bankruptcy has been under federal jurisdiction. Under the Commonwealth *Bankruptcy Act* 1966 South Australia is a bankruptcy 'district' and jurisdiction is exercised through the Court of Insolvency of the State of South Australia exercising Commonwealth jurisdiction in bankruptcy.

Bankruptcies: Numbers, Liabilities, Assets, South Australia

Year	Sequestration Orders and Orders for Administration of Deceased Debtors Estates			Compositions, Schemes of Arrangement and Deeds of Assignment			Total Debtors
	Number	Liabilities	Assets	Number	Liabilities	Assets	Number
		\$	\$		\$	\$	
1963.....	496	2,062,272	899,036	88	1,401,768	1,210,390	584
1964.....	626	2,539,338	1,260,992	49	543,966	472,612	675
1965.....	543	2,925,218	1,564,316	39	581,544	490,774	582
1966.....	617	2,859,762	1,185,523	31	594,521	342,549	648
1967.....	638	3,026,573	1,532,269	21	243,189	164,563	659

The new Commonwealth Bankruptcy Act, 1966, which was proclaimed to come into effect from 4 March 1968 contains substantial changes in bankruptcy law.

Under the new Act the debt necessary to begin bankruptcy proceedings has been increased from \$100 to \$500. A bankrupt who has not been discharged within five years will be automatically discharged unless an objection is filed with the Registrar in Bankruptcy. A bankrupt who wishes to seek discharge at an earlier date will have to apply to the Court. The provisions governing automatic discharge will not apply to a bankrupt under the existing law until three years from 4 March 1968.

Significant changes have been made in the position of the Crown. The preferential treatment of the Commissioner of Taxation on arrears of income tax under the previous law has been changed. Under the new law he will be able to claim priority of payment for only one year's earnings before the date on which the taxpayer became bankrupt.

The new law increases the priority in claiming unpaid wages from \$100 to \$600, and the amount of priority for workers compensation, not covered by insurance, has been increased from \$400 to \$2,000. Provision is also made for employees to claim priority for amounts due for long service leave, annual leave, recreation leave or sick leave. The Act has also made substantial changes in the procedures by which a debtor may arrange for the payment of his debts with his creditors outside bankruptcy.

ADOPTION COURTS

Adoption courts are held in Adelaide, Port Adelaide and all major country towns. They are presided over by a special magistrate and two justices of the peace, one of whom must be a woman. The function of these courts is to enquire into the character and standing of persons applying to adopt a child and to decide whether the adoption would be for the benefit of the child. For details of adoptions see the table on page 224 and also the special article on pages 221-4, especially the new legislation.

JURY SYSTEM

The procedure in relation to juries is governed by the Juries Act, 1927-1965.

With certain exceptions all men over the age of twenty-five and under sixty-five who are enrolled as electors for the House of Assembly are qualified and liable to serve as jurors. Men exempted from liability to serve are listed in the third schedule of the Act and include judges, members of Parliament, certain public officers, members of the defence forces, clergymen, legal practitioners, magistrates, police officers, doctors, dentists, pharmacists and school teachers.

Legislation passed in 1965 provided for women to serve on juries under the same qualifications as men. Automatically exempted are nurses and wives of judges or magistrates, but any other woman may be exempted upon application.

A jurors list is compiled annually for each jurors district by the Sheriff. The jurors summoned to hear and determine an issue are decided by lot. Accused persons and the Crown each have the right to challenge three jurors without assigning reasons.

STATE INDUSTRIAL TRIBUNALS

Industrial arbitration in South Australia was inaugurated in 1894 by the establishment of Boards of Conciliation. Since then the system has undergone fundamental changes from time to time and the present basis is the Industrial

Code, 1967, under which the Industrial Commission, Conciliation Committees and Commissioners have been established.

For details on the composition of these bodies and their functions see Part 7.2.

LEGAL ASSISTANCE SCHEME

The Poor Persons Legal Assistance Scheme is administered by the Law Society of South Australia Incorporated. It has been in operation since 1933 as a means of providing legal help necessary for persons who would otherwise through lack of money be embarrassed or prevented from the proper assertion of their legal rights.

The basis of the scheme is an agreement between the Government and the Law Society which has given an undertaking that 'no person shall be without proper legal assistance if he is deserving of such assistance and would be unable to obtain it without the help of the Society's members'. In return, the Government makes an annual grant to the Society (\$21,000 in 1966-67) to cover the administrative expenses in carrying out the scheme. In addition, the Government makes a half-yearly grant out of which members of the profession who undertake assignments under the scheme receive payment of out-of-pocket expenses and a proportionate amount of costs. The amount granted for 1966-67 was \$12,000 representing an average return on all work done of eighteen cents in the dollar.

PUBLIC TRUSTEE

The office of Public Trustee was established in 1881 and is now regulated by the Administration and Probate Act, 1919-1960.

The office provides a necessary and efficient service to the public in ensuring the safe and economical administration of estates and the protection of infants and absentee beneficiaries in estates administered by private administrators. Any person may appoint the Public Trustee to be the executor and trustee of a will. He may also appoint him as trustee of any disposition of property creating a trust, other than a trust exclusively for religious purposes.

The Public Trustee, where directed by the Court, becomes administrator of certain deceased estates; acts as guardian of certain infants; controls a protected person's property under the Aged and Infirm Persons' Property Act; and receives, invests and distributes for the benefit of widows and orphan dependants, amounts awarded under the Workmen's Compensation Act.

Under the Mental Health Act, the Public Trustee has control of the estates of patients in Government mental hospitals, and may be appointed to act for the estate of any person found to be of unsound mind.

THE SOUTH AUSTRALIAN POLICE FORCE

Although South Australia was colonised in 1836 there was no police force until 1838. The original police force was administered by a board of commissioners until 1840, when the first Commissioner of Police was appointed.

Early mobility depended largely on horses, and it was not until 1922 that the first motor cycles were introduced into the force as a forerunner of the present day motorised components. The system of radio-controlled patrols was introduced in 1948. In addition to the metropolitan network, all country police headquarters and a number of outback stations are in constant radio contact with the central radio room in Adelaide.

Police Personnel^(a), South Australia

At 30 June

Personnel	1963	1964	1965	1966	1967
Commissioned officers	38	39	41	43	46
Non-commissioned officers	187	180	185	186	332
Constables	1,177	1,232	1,290	1,322	1,243
Women police	39	45	42	44	39
Total active police force	1,441	1,496	1,558	1,595	1,660
Inhabitants per active member ..	701	694	685	687	670

(a) Active police force strength ; excludes trainees, Women Police auxiliaries, civil staff, etc.

Routine maintenance of law and order and reduction of opportunities for criminal activity are the main functions of the Uniformed Branch.

The Traffic Division, while concerned with the general regulation and control of traffic, also aims at reducing the number of road fatalities and injuries. Testing of vehicles for roadworthiness, lecturing on road courtesy and safety, practical driving courses and driving tests for licence applicants are all aimed at greater road safety.

The Criminal Investigation Branch is split into squads each concerned with a particular type of crime. Auxiliary services provided by the *modus operandi*, fingerprint and photographic, scientific, ballistics and handwriting sections are often essential aids in criminal investigation.

Women Police officers have a role in the social welfare of the community which is now well recognised. These officers render assistance to lost and destitute children and endeavour to alleviate domestic suffering and hardship. They are also active in the fight against juvenile delinquency. At 30 June 1967 there were thirty-nine Women Police officers.

In 1959 a Police Emergency Operations Group consisting of a Cliff Rescue Squad, Underwater Recovery Squad and an Emergency Squad was constituted. The Commissioner of Police is also responsible for the Emergency Fire Services, operations of which are outlined on page 141.

Today, with a proliferation of laws and changing policing techniques, much emphasis is placed on the work of the Training Division. Police cadets (enrolled at sixteen or seventeen years) are given a three year course of academic and practical instruction at the Fort Largs Training Academy before graduating to active police work. At 30 June 1967 there were 361 police cadets. As well as this initial training, refresher courses keep the members abreast of changing administrative and legal developments, and of changes in policing techniques. Also provided are specialist and higher training courses for senior officers, and each year a number of members attend the Civil Defence School at Mount Macedon, Victoria.

South Australian Police Force, Revenue and Expenditure^(a)

Year	Expenditure			Revenue	Net Cost	
	Wages and Salaries	Other	Total		Total	Per Inhabitant
	\$	\$	\$	\$	\$	\$
1962-63	4,362,816	1,553,850	5,916,666	91,640	5,825,026	5.83
1963-64	4,639,230	1,704,276	6,343,506	98,264	6,245,242	6.10
1964-65	5,229,414	1,791,938	7,021,352	109,774	6,911,578	6.57
1965-66	5,519,200	1,919,496	7,438,696	119,547	7,319,149	6.77
1966-67	6,459,754	2,077,347	8,537,101	119,960	8,417,141	7.62

(a) As reflected in Consolidated Revenue Account only. Most capital expenditure is met from Loan Fund

GAOLS AND PRISONS

There were seven gaols and prisons in use in South Australia during the year 1966-67. Adelaide Gaol, a holding centre for remand prisoners and sentenced prisoners serving under three months, also houses a womens section. Yatala Labor Prison (eight miles from Adelaide) provides for minimum, medium and maximum security prisoners with sentences from three months to life. Gladstone Prison (mid-North), Port Augusta Gaol (North), Mount Gambier Gaol (South-East), and Port Lincoln Prison (West Coast), are all medium security institutions. Cadell Training Centre on the River Murray 100 miles from Adelaide is a dual purpose training institution, accommodating sixty selected minimum security trainees and sixty medium security short-term prisoners. In addition there were seven police prisons strategically situated throughout the State to cater for short-term prisoners.

Extensions at Yatala for a further sixty minimum security prisoners and accommodation at Cadell for an additional fifty minimum security trainees were under construction in June 1968. A new womens prison is to be built at the suburb of Northfield to replace the present womens section at the Adelaide Gaol. Plans are still in hand for the building of a new gaol at Port Augusta.

In common with other States and countries the emphasis in South Australia is on rehabilitation. With this end in view officers are carefully selected and undergo an intensive training course before being appointed to the prison service. Refresher and advanced training courses are held continuously to keep officers informed on penological matters. A large variety of trades and industries is available throughout the institutions enabling prisoners to be trained for ultimate outside employment. Education courses at all levels are available at no cost; special classes are held for migrants and illiterates; medical, dental, psychological, and psychiatric services are also provided. A classification committee ensures that prisoners are correctly assessed for education, employment, and other training purposes, etc. and group counselling is practised in all institutions. Chaplains, the Prisoners Aid Association and other voluntary organisations willingly assist the prison administration in a wide range of matters affecting the well-being and after-care of prisoners and their families.

Two valuable community services rendered by prisoners are the transcription of books into braille for the blind, and the provision of emergency fire service units at three institutions.

In South Australia the terms 'parole' and 'probation' are synonymous. Prisoners may be released on probation by the courts or released on probation from prison after serving portion of their sentence. Both categories of probationers

come under the supervision of probation officers of the Adult Probation Service. Officers of this service also supervise prisoners released on licence, such as habitual criminals, and those serving life sentences. The Adult Probation Service also prepares pre-sentence reports for the courts.

Gaols and Prisons, South Australia

Year	Total Accommodation for Prisoners	Prisoners Received to Serve Sentence (a) (b)		Daily Average Number of Prisoners under Sentence (a)	
		Males	Females	Males	Females
1962-63	1,018	4,933	108	652	10
1963-64	1,015	4,314	178	679	16
1964-65	1,022	4,078	125	712	16
1965-66	1,065	4,773	118	678	19
1966-67	1,118	4,520	136	684	21

(a) Number of prisoners excludes debtors and Aborigines.

(b) Counted once each time received.

PUBLIC SAFETY

FIRE SERVICES

The Fire Brigades Board

Provision for the establishment and maintenance of fire brigades in South Australia under the control and management of the Fire Brigades Board was first enacted in 1882.

In accordance with its general duty of extinguishing fires and protecting life and property in case of fire, the Board maintains suitably equipped fire brigades in proclaimed fire districts in the Adelaide Metropolitan Area and in country towns. At 30 June 1967 there were thirty-six fire brigade stations of which twelve were metropolitan and twenty-four were country. During the year 1966-67 these brigades received 3,878 calls of which 440 were false and malicious calls. Some of these brigades are manned by permanent personnel and others by auxiliary firemen, there being at 30 June 1967, 388 officers and firemen and 90 auxiliary firemen.

In addition to its main function, the Board provides a service section for the regular maintenance of private fire equipment installed in public and private premises, and makes its officers available for inspection of premises and for advice on fire protection generally, as well as to demonstrate the use and handling of various types of first aid fire equipment. The Board also provides a burning-off service available in the season to owners of vacant properties, within the areas in which the Board has jurisdiction.

The Fire Brigade Act, 1936-1958 provides that the expenses and maintenance of brigades be defrayed in the proportion of two-ninths by the Treasury; five-ninths by insurance companies; and two-ninths by the municipalities and district councils concerned. If the Treasury proportion exceeds its statutory contribution of approximately \$27,000, the excess is borne five-sevenths by insurance companies and two-sevenths by municipalities and district councils.

The total revenue for the year 1966-67 was \$1,524,963 including contributions of \$1,291,320 made up as follows: insurance companies \$776,992; municipalities and district councils \$310,797; and Treasury \$203,531 which included a special grant of \$176,199.

South Australian Emergency Fire Services

The South Australian Emergency Fire Services was formed as a branch of Civil Defence during the 1939-45 War. When Civil Defence was disbanded, redundant trailer pumps were issued to local governing bodies by the State Government and the Emergency Fire Service was developed into a volunteer country fire service, to protect those areas outside of the districts covered under the Fire Brigades Act. The responsibility and authority for fire prevention and control in these outer areas are vested in local government by the Bushfires Act and Local Government Act.

E.F.S. Headquarters, a branch of the Police Department, functions as a co-ordinating centre. The Director of Emergency Fire Services, responsible to the Commissioner of Police, advises on fire protection problems, conducts competitions and training programmes, and co-ordinates fire-fighters and auxiliaries in major fire control.

Fire equipment purchased by E.F.S. organisations and councils is subsidised by the Bushfires Equipment Subsidies Fund (equal contributions by the State Government and by fire insurers), and government subsidies are provided for maintenance.

South Australian Emergency Fire Services

Particulars	1963	1964	1965	1966	1967
Strength of service at 30 June:					
Affiliated organisations	338	345	360	377	392
Volunteer members	5,600	6,500	7,000	7,500	8,500
Fires attended in twelve months ended 30 June:					
Number of fires;					
Domestic	645	202	175	220	260
Rural		1,047	1,084	1,301	899
Acres destroyed in rural fires .	25,117	144,931	107,172	155,881	36,829
Financial losses;					
Domestic	\$221,938	\$226,612	\$201,448	\$292,230	\$286,948
Rural		\$250,752	\$649,698	\$419,926	\$413,603

LIFE SAVING

The Royal Life Saving Society

The South Australian Branch of the Royal Life Saving Society—Australia was established in 1909 and the formation of clubs at various beaches followed. In 1952 an agreement was made with the Surf Life Saving Association whereby this body undertook responsibility for life saving on ocean beaches, the Royal Life Saving Society retaining responsibility in all other areas of activity.

In South Australia the Society has developed into a large teaching body administered by a State Council, giving instruction to schools and other interested bodies in the various methods of life saving, including the current methods of artificial respiration. This is done through the medium of honorary instructors and examiners. In the winter months the emphasis is on talks and demonstrations on resuscitation, but during the swimming season weekly life saving instruction and examination and the performance of life saving demonstrations are conducted throughout the State. Certificates and medallions are issued to candidates who pass the various examinations. In the 1966-67 season these awards exceeded 26,000.

The honorary work of the Society is financed mainly by grants made by both the Commonwealth and the State Governments, and by donations.

The Surf Life Saving Association

The South Australian State Centre of the Surf Life Saving Association of Australia was formed in 1952, with the co-operation of the South Australian Branch of the Royal Life Saving Society and the Surf Life Saving Association of Australia.

The Henley, Glenelg and Moana Life Saving Clubs formed the nucleus of this body, which now has eighteen affiliated clubs situated at Semaphore, Grange, Henley, West Beach, Glenelg, Somerton, Brighton, Seacliff, Christies Beach, Port Noarlunga, Southport, Moana, Chiton Rocks, Port Elliot, Port Lincoln, Whyalla, Taperoo Beach and Port MacDonnell.

Voluntary members give many hours to patrolling their respective beaches each weekend and public holiday from the beginning of November until the end of March. At 30 June 1967 there were 1,360 members in Association clubs. From 1952 to the end of the 1966-67 season 963 rescues were performed with no loss of life on South Australian beaches whilst being patrolled by club members. During this same period many hundreds of persons received first-aid treatment.

The South Australian State Centre receives an annual grant from the State Government and individual clubs have been assisted with subsidies when building their club houses.

'Learn to Swim' Campaign

Vacation swimming classes organised by the Education Department were first established on an extensive scale in January 1956. Thirty-six country and fourteen metropolitan swimming centres were set up and over 7,000 children enrolled for instruction. The January 'Learn to Swim' campaign has been continued in each subsequent year and has grown steadily; in the summer vacation of 1966-67, 113 country and 45 metropolitan swimming centres were used, and the total student enrolment was over 41,800. Instruction is provided over a period of ten days by qualified swimming teachers.

Swimming classes have also been conducted in school time since October 1954, and in the summer of 1966-67 some 50,600 children were enrolled in such classes.

The success of the campaign can be illustrated by the fact that of children aged eleven years and over in departmental schools, 82 per cent could swim at least ten yards in 1967, compared with 60 per cent in 1957.

INDUSTRIAL ACCIDENT PREVENTION

The post-war growth of industrial activity in this State was accompanied by an increasing toll of injuries and fatalities sustained during the course of employment. Legislation requires certain minimum standards of safety in working conditions to be provided in various industries, and inspections are made to ensure compliance with legislative requirements. However, legislation and inspection are not the only means of minimising industrial accidents and in the late 1950s the South Australian Government implemented a programme of education for management, supervisors and employees in accident prevention measures, with the object of making all sections of industry more 'safety conscious'.

Safety officers employed in the Department of Labour and Industry actively pursue this policy by conducting safety training courses, presenting lectures, screening films and distributing industrial safety pamphlets produced within the department.

In 1963 the Industrial Accident Prevention Society of South Australia (since September 1967 the National Safety Council of Australia S.A. Division) was formed in an endeavour to interest management in the need for a planned accident prevention programme and to assist them in undertaking such a programme. These aims are being achieved by safety surveys relating to employment, the conducting of safety training courses and the distribution of safety publications and educational materials.

In addition the Safety Engineering Society of Australasia, the Australian Institute of Management (Adelaide Division), the South Australian Institute of Technology and the Commonwealth Department of Labour and National Service make valuable contributions within their particular spheres of activities to the promotion of industrial safety. Further details relating to industrial accidents will be found in Part 7.4.

THE NATIONAL SAFETY COUNCIL (S.A.) INCORPORATED

The National Safety Council had its origin in the Look Both Ways Club, which was formed at the turn of the century for the promotion of greater road safety. The Council was incorporated under its present name in 1930. Its aim is to co-ordinate and pursue means for the prevention of accidents and to educate the public to a greater sense of safety consciousness. The Council is controlled by a Committee of Management, and has subcommittees concerned with traffic, child and youth, industrial and general safety.

SOUTH AUSTRALIAN ROAD SAFETY COUNCIL

The South Australian Road Safety Council was formed in December 1965 as a result of a decision by State Cabinet. The Council, which has affiliation with the Australian Road Safety Council, has ten members appointed by Cabinet, an independent chairman and representation from the Police Department, the Education Department, the South Australian Railways Department, the Road Traffic Board, the Local Government Association, the Municipal Association, the Royal Automobile Association of South Australia, the Fire and Accident Underwriters' Association of South Australia and the Trades and Labor Council of South Australia.

During 1966-67 the Council received a \$9,000 grant from the State Government and a \$12,500 Commonwealth Government grant for road safety practices.

6.2 EDUCATION

In South Australia attendance at school is compulsory for children from six to fifteen years of age. Many children, however, commence their formal education at an earlier age than six, either by attending a kindergarten or by enrolling at school after reaching five years of age.

Education at the primary and secondary level is available at State schools, controlled by the Education Department, and at private schools, most of which are denominational. The Education Department also controls the South Australian School of Art and the Technical Colleges. Roseworthy Agricultural College is conducted by the Department of Agriculture. The University of Adelaide, the Flinders University of South Australia and the South Australian Institute of Technology are independently controlled but are financially dependent on Government grants.

Facilities for adult education are provided by the Workers Educational Association, the University of Adelaide and the Education Department.

Historical

The first school in South Australia was conducted on Kangaroo Island in 1836. A private venture, it closed after several months through insufficient financial support. In 1835 there had been formed in London the South Australian School Society with the object of establishing infant schools in the new colony. The Society's first and only school opened in Adelaide in 1838, and continued until 1843 when it was relinquished to private interests.

It was not until 1847 that the Government showed its first official interest in education by authorising the payment of a subsidy to approved teachers of \$2 per pupil per annum. The Education Act of 1851 went further and set up a Central Board of Education with power to license schools and teachers. The Board could also make grants for school buildings and pay salaries of from \$80 to \$200 per annum to licensed teachers. At this time parents with means customarily sent their children to private schools, of which there were a large number, in most cases under the ownership of private citizens. There were also the church schools including St. Peters School Collegiate (1847), Pulteney Street Church of England Grammar School (1848), Prince Alfred College (1869), and a number of Catholic schools.

The present system of public schools, controlled and supported by the Government, dates from the Education Act of 1875. This Act, for the first time, made attendance at school compulsory. The compulsion, however, applied only to children aged from seven to thirteen years, and required attendance for only seventy days a half-year. Fees ranging from 3c to 8c per week were charged, but exemption from payment was granted in cases of poverty. The payment of fees continued until 1892 for children under thirteen years of age, and until 1898 for those aged thirteen or more. In 1876 most of the licensed schools were taken over as public schools.

To provide secondary education for girls, the Education Department in 1879 opened the Advanced School for Girls; however, fees were charged and the school was self-supporting. In 1897 the Education Department opened a secondary school for boys—the Agricultural School, which was closed after five years, and subsequently re-opened in 1903 under the auspices of the School of Mines and Industries as the Adelaide Technical High School.

The State's present extensive system of secondary schools dates from 1907 when continuation classes were started at seven country primary schools. In the following year these classes were made district high schools, although still attached to primary schools. In the same year the Adelaide Continuation School was opened, to be amalgamated a few months later with the Advanced School for Girls as the Adelaide High School.

In 1915, following a Royal Commission on Education, attendance at school was made compulsory for five days per week for children aged six to fourteen years. At the same time provision was made for technical education, and for a further expansion of secondary education.

In 1920 the Correspondence School was started, and in 1922 a number of primary schools became higher primary schools, thus making secondary education available in the more remote country areas. The present technical high schools originated in 1925, when many of the large metropolitan primary schools were made central schools, giving courses of secondary education.

The last twenty-five years have seen a policy of consolidation of country schools; over 600 small schools have been closed and bus services to centrally situated schools provided instead.

Various institutions for tertiary education developed alongside the State school system. In 1861 the South Australian School of Art was founded, coming under the control of the Education Department in 1909. The University of Adelaide was established by Act of Parliament in 1874 and began academic work two years later. In 1885 Roseworthy Agricultural College was opened, and in 1889 the School of Mines and Industries, later to become the South Australian Institute of Technology, was established. The present system of training for apprentices began with the Technical Education of Apprentices Act of 1917.

PRE-SCHOOL EDUCATION

The kindergarten movement in South Australia was founded in 1905. Until the end of the 1939-45 War kindergartens were primarily designed for the care and education of under-privileged children. Since 1946 they have become generally accepted as a phase of education, with a consequent rapid increase in facilities.

Although some independent kindergartens are conducted by private individuals, or by private schools, the vast majority of pre-school education is under the supervision of the Kindergarten Union of South Australia (Inc.). This organisation has a twofold function: firstly in the training of kindergarten teachers (see page 171), and secondly in the supervision of over 120 kindergartens situated throughout the State.

While the supervision covers various aspects of organisation it is largely concerned with the educational programme. As well as encouraging the creative, physical and mental development of the four to five years old child the kindergarten prepares him for the experiences of formal schooling. Sessions are generally of two and a half to three hours duration each day, with enrolments limited to thirty children per session. In most cases two sessions are held daily thus providing for sixty children.

Kindergartens^(a), South Australia

Year	Kinder- gartens (b)	Instruc- tors	Children: Average Atten- dance	Receipts			Expenditure		
				Govt Aid	Other	Total	Salaries	Other	Total
	No.	No.	No.	\$	\$	\$	\$	\$	\$
1963 (c)	117	319	4,747	498,016	358,724	856,740	499,546	261,600	761,146
1964	120	328	4,760	404,514	290,570	695,084	494,770	233,682	728,452
1965	121	331	5,109	434,268	305,748	740,016	521,274	225,338	746,612
1966	124	343	5,105	483,002	328,546	811,548	583,973	232,549	816,522
1967	124	342	5,268	520,700	344,815	865,515	627,507	228,882	856,389

(a) Schools administered by the Kindergarten Union of South Australia (Incorporated).

(b) At end of period.

(c) Sixteen months ended December.

The Kindergarten Union, while a voluntary organisation, receives approximately 60 per cent of its revenue from a State Government grant. Part of this grant is in turn used to subsidise the salaries of teachers at individual kindergartens.

However, local committees are responsible for the construction, equipping and maintenance of their own kindergartens, revenue for these purposes coming from either direct contributions or various fund raising activities.

GENERAL SCHOOL EDUCATION

The State Government, through the Education Department, provides free facilities for primary and secondary education; however, parents may choose between State and private schools. The Education Department functions under the Minister of Education. The permanent head of the department is the Director-General of Education, assisted by a Deputy Director-General of Education and Directors of Primary Education, Secondary Education, Technical Education and Teacher Education and Services. Northern Territory schools also are controlled by the Education Department on behalf of the Commonwealth Government, with a Superintendent stationed at Darwin.

The work of the schools is materially assisted by the school councils and committees, and also by the mothers clubs, parents and friends associations and welfare clubs. These bodies have for many years been instrumental in raising large sums for the purchase of additional amenities for the schools.

In country areas many children are conveyed to State schools by free bus services provided by the Education Department. At the end of 1967 there were 619 bus services carrying 22,950 pupils daily to 311 schools.

Although private schools largely follow the State schools in their curricula, the Education Department exercises no formal authority over these schools beyond requiring them to submit certain statistical returns.

By arrangements with the controlling authorities, inspectors of schools visit non-departmental primary schools biennially for advisory purposes and to report on the efficiency of the school. The grade VII classes in those schools are inspected when it is desired that the pupils be considered for promotion to secondary grades. This is normally a pre-requisite for the granting of Government book, boarding and travelling allowances at the secondary level.

Secondary inspectors visit non-departmental schools only when the school first applies for recognition as an approved school for the receipt of allowances by its students. The similarity between courses in the State and private secondary schools is due to the influence of the Public Examination Board syllabus and the close liaison of the administration and teachers of both types of school.

The Catholic school system is organised on a diocesan basis. South Australia is divided into two dioceses, Adelaide and Port Pirie. Within the former, supervision is exercised by the Archbishop through the Director of Catholic Education and Inspector of Schools; within the latter, by the Bishop through his Inspector of Schools.

Schools

Details of schools operating in South Australia in 1967 are given in the next table. The average size of State schools has increased rapidly since 1940 partly as a result of the consolidation of country schools. The 663 State schools in 1967 compared with 1,043 in 1940 and 1,108 in the peak year of 1935. In 1940 there was an average of 73 pupils to each State school, with this figure increasing to 125 by 1950, 255 by 1960 and 327 by 1967. There has been a similar movement in the average size of private schools.

Schools by Size, South Australia

At 1 August 1967

Pupils on Roll	State Schools					Private Schools
	Primary	Primary-Secondary	Secondary	Special (a)	Total	
Under 21	80	—	—	7	87	6
21 to 35	59	—	—	4	63	10
36 to 100	121	6	1	17	145	38
101 to 200	46	8	6	1	61	53
201 to 300	27	11	10	—	48	27
301 to 400	22	11	11	1	45	14
401 to 600	42	9	18	—	69	14
601 to 800	41	4	19	—	64	8
801 to 1,000	25	2	6	—	33	3
1,001 to 1,200	21	—	4	—	25	—
1,201 to 2,000	10	—	13	—	23	—
Total	494	51	88	30	663	173

(a) Occupation centres, schools at institutions, subsidised schools and schools for Aborigines.

Teachers

The numbers of teachers employed in primary and secondary schools in recent years are shown in the following table. A rapid expansion in the school population in the post-war period necessitated a considerable increase in teaching staff. The 8,669 full-time and 650 part-time teachers at State schools in 1967 compares with 2,634 and 291 in 1946. The number of females employed as teachers has increased more rapidly than males, and whereas females constituted 46 per cent of the full-time teaching staff in State schools in 1946, in 1967 they represented 58 per cent.

Teachers, South Australia

At 1 August	State Schools				Private Schools			
	Full-time		Part-time		Full-time		Part-time	
	Males	Females	Males	Females	Males	Females	Males	Females
1963.....	2,729	4,166	14	417	361	804	57	262
1964.....	2,977	4,363	23	454	389	842	68	261
1965.....	3,246	4,626	18	450	401	851	64	291
1966	3,444	4,745	35	446	419	887	69	302
1967.....	3,653	5,016	63	587	429	886	72	324
Type of School : 1967								
Primary.....	1,463	3,335	10	294	47	395	19	115
Prim.-Secondary .	437	363	7	28	217	428	40	175
Secondary.....	1,698	1,217	46	265	165	58	12	32
Special (a)	55	101	—	—	—	5	1	2

(a) Includes occupation centres, schools at institutions, subsidised schools and schools for Aborigines.

Pupils

School enrolments, which had been declining since 1932, started to rise rapidly at the end of the 1939-45 War, and since 1945 have more than trebled. Enrolments in recent years, classified by whether attending State or private schools and by age of the pupil, are given below.

Primary and Secondary Pupils, South Australia*At 1 August*

Age	At State Schools				At Private Schools			
	1964	1965	1966	1967	1964	1965	1966	1967
5.....	15,169	15,884	16,512	16,743	2,392	2,581	2,391	2,190
6.....	18,256	19,452	20,347	20,593	3,208	3,145	3,118	2,919
7.....	18,345	18,656	19,764	20,430	3,098	3,020	3,106	2,935
8.....	18,005	18,810	19,285	19,984	3,114	3,160	3,037	3,016
9.....	17,609	18,443	19,115	19,442	3,109	3,042	3,103	2,996
10.....	17,553	18,072	18,928	19,293	3,080	3,131	3,041	3,131
11.....	17,698	17,947	18,385	18,839	3,192	3,137	3,078	3,116
12.....	17,223	17,894	18,106	18,385	3,278	3,337	3,382	3,394
13.....	16,980	17,451	18,261	18,257	3,561	3,405	3,393	3,363
14.....	16,476	17,078	17,579	18,366	3,397	3,241	3,252	3,188
15.....	11,748	13,093	13,500	14,355	2,779	2,875	2,901	2,878
16.....	6,708	6,829	7,741	8,547	2,042	2,036	2,195	2,244
17.....	2,385	2,428	2,345	3,100	1,091	1,110	950	1,271
18.....	459	599	567	700	310	392	240	361
Total	194,614	202,636	210,435	217,034	37,651	37,612	37,187	37,002

A division of enrolments in 1967 between primary and secondary levels is set out below. In 1945 approximately 17 per cent of total enrolments were at the secondary level; by 1967 this figure had risen to 30 per cent. This table also illustrates the somewhat greater importance of private schools at the secondary level where they account for some 18 per cent of enrolments as opposed to 13 per cent at the primary level.

Primary and Secondary Pupils*At 1 August 1967*

Age	At State Schools			At Private Schools			Total Pupils
	Primary	Secondary	Total	Primary	Secondary	Total	
5.....	16,743	—	16,743	2,190	—	2,190	18,933
6.....	20,593	—	20,593	2,919	—	2,919	23,512
7.....	20,430	—	20,430	2,935	—	2,935	23,365
8.....	19,984	—	19,984	3,016	—	3,016	23,000
9.....	19,442	—	19,442	2,996	—	2,996	22,438
10.....	19,293	—	19,293	3,131	—	3,131	22,424
11.....	18,820	19	18,839	3,093	23	3,116	21,955
12.....	13,284	5,101	18,385	2,425	969	3,394	21,779
13.....	3,896	14,361	18,257	690	2,673	3,363	21,620
14.....	1,061	17,305	18,366	119	3,069	3,188	21,554
15.....	199	14,156	14,355	19	2,859	2,878	17,233
16.....	69	8,478	8,547	—	2,244	2,244	10,791
17.....	53	3,047	3,100	—	1,271	1,271	4,371
18.....	107	593	700	—	361	361	1,061
Total	153,974	63,060	217,034	23,533	13,469	37,002	254,036

PRIMARY EDUCATION

Children normally begin their schooling at the age of five years when they enrol for primary education at either a State or private school. Primary education involves a seven year course and concludes with the award of the Progress Certificate in Grade VII.

STATE SCHOOLS

Metropolitan children attend primary schools. Country children normally attend a primary or an area school; however those in remote areas may receive lessons by correspondence.

The following table shows the number of primary and area schools operating in recent years and the number of primary pupils enrolled at State schools.

State Primary Education, South Australia

At 1 August	Schools			Pupils Enrolled					
	Primary		Area (a)	Primary Schools		Area Schools (a)	Corres- pondence School	Other (b)	Total
	With Infant Dept	Total		Infant Depts	Other				
1963	87	518	37	24,940	101,665	9,348	839	1,284	138,076
1964	86	516	39	25,034	105,502	9,752	858	1,250	142,396
1965	90	520	40	27,136	107,397	9,932	756	1,454	146,675
1966	90	507	48	27,735	110,883	10,814	576	1,487	151,495
1967	90	494	50	27,372	113,264	11,142	620	1,576	153,974

(a) Includes also special rural schools from 1966. The figures for pupils enrolled include primary pupils only.

(b) Includes Aboriginal schools, schools for handicapped children and schools at institutions.

Primary Schools

Children begin in either the infant department of a large school or in Grade I of a smaller school, school sizes varying from over 1,000 pupils to as few as ten pupils.

At the beginning of 1967, ninety primary schools had separate infant departments. In these departments the children progress through Grades I and II. It is in the infant departments, and Grades I and II of other primary schools, that children are first formally introduced to books, music, numbers, colour, and form and movement. Rhythm and organised games form an important part of infant activity.

The primary school curriculum is not rigid but specifies a general framework under the headings of English, arithmetic, creative art and craft, and 'other life interests' which include social studies, nature study, music, physical education and religious instruction. Within this framework teachers select and arrange studies in the light of their pupils' needs.

School libraries form an integral part of the primary education system, as do also facilities for showing films and for listening to the school broadcasts provided by the Australian Broadcasting Commission. Facilities are also available for physical education and various forms of craftwork.

Area Schools

Area schools, situated in country centres, cater for both primary and secondary pupils. The primary course is similar to that of the primary schools.

Correspondence School

The Correspondence School was started in 1920 to cater for children unable to attend ordinary schools. Most of such children live in remote parts of South Australia and the Northern Territory, but there are others who cannot attend school through invalidity.

Connected with the Correspondence School are the 'Schools of the Air' at Ceduna, Port Augusta and Alice Springs which provide two-way radio communication between teacher and pupils and so supplement the correspondence lessons.

At 1 August 1967 there were 277 boys and 343 girls receiving primary education through the Correspondence School. Of these, 65 boys and 107 girls were living in the Northern Territory.

PRIVATE SCHOOLS

At 1 August 1967, 23,533 children were receiving primary education through private schools. The majority of these children were attending Catholic schools (see table on page 155).

Catholic Schools

Most children under the Catholic school system receive their primary education in parochial schools. At these schools no fees are demanded, but parents are asked to make some voluntary contributions. Such schools are parochial property and the parochial authorities are responsible for the buildings, maintenance and equipment.

In addition to the visits by the departmental inspectors (see page 146) Catholic primary schools are visited by the Catholic school inspector.

A number of children receive their primary education in the colleges for boys and girls. These colleges are fee-charging.

Other Schools

Primary schools are conducted by the Church of England, the Lutheran Church, and the Seventh-Day Adventists Church. Primary education is also provided in preparatory schools attached to secondary schools run by the Church of England, the Methodist Church and the Presbyterian Church, and at two schools under private ownership.

SCHOOLS FOR HANDICAPPED CHILDREN

The Education Department, through the Psychology Branch, makes provision for children suffering from mental or physical disability. The Psychology Branch provides advice for parents and teachers of backward children and problem children, many of whom are helped in the Opportunity and Remedial Classes conducted at some of the large primary schools. There are also twelve Occupation Centres for children with serious mental deficiency, and a Sheltered Workshop Training Centre for mentally retarded adolescents.

For children with severely defective hearing there are four Speech and Hearing Centres, and there is provision for hard-of-hearing children at ordinary schools. Speech therapists are available to help children with defective speech.

The Education Department conducts schools at Minda Home for the mentally retarded, Townsend House for blind, deaf and dumb children, Somerton Crippled Childrens Home and Estcourt House convalescent home. The school at the Woodville Spastic Home is privately managed but employs a departmental officer as Head Teacher.

A number of private agencies also provide educational facilities for handicapped children.

SECONDARY EDUCATION

Children who have completed their primary schooling are required by law to attend a secondary school until the end of the term in which they reach their fifteenth birthday. Secondary education may be obtained at either State or private schools.

STATE SCHOOLS

The Education Department provides several kinds of secondary schools. Metropolitan pupils may choose between high schools and technical high schools, but are required to attend schools within the zone in which they reside. In the country secondary education is provided by high schools in most of the larger towns, and by high, area or special rural schools in many of the smaller centres; only one of these schools is located in any one centre. There are, however, technical high schools at Mount Gambier and Whyalla, and certain pupils may use the facilities of the Correspondence Schools.

High Schools

High schools are provided in the metropolitan area and in most of the larger country towns. These schools are normally co-educational. High schools provide both academic and non-academic courses, with special provision for commercial subjects, and in some cases for instruction in craft subjects. Thus a variety of courses is available.

The general course is primarily concerned with preparing pupils for the Public Examinations Board (P.E.B.) examinations. A selection from English, mathematics, geography, history, foreign languages, sciences, social studies, drawing, woodwork, home science, physical education and music is the curriculum of most schools, at least for selected classes. Organised sport is available in all schools, and dramatic work, opera, and other musical forms are common activities.

The actual course of study that the pupil undertakes is largely determined by a series of tests given within the first day or two at school. Pupils sit for the Intermediate, Leaving, and Matriculation P.E.B. examinations (see footnote page 155). Matriculation classes are available only at certain high schools.

The commercial course also leads to the P.E.B. examinations and includes book-keeping, typewriting, English, geography, drawing, arithmetic, and in some cases shorthand. Pupils may sit for the Intermediate and Leaving examinations (see footnote page 155), and many metropolitan high schools also offer a non-examination course in typing and commercial practice.

Agricultural science is taught in several country high schools. In addition Urrbrae Agricultural High School, in the metropolitan area, provides a secondary education for boys who aim to take up a career connected with agriculture. The school's syllabus includes agricultural science, farm mechanics and field work as well as the normal academic subjects. Pupils may sit for both the Intermediate and Leaving examinations of the P.E.B. (see footnote page 155).

Alternative courses, which do not lead to the P.E.B. examinations, are available at a number of high schools. These courses, which diverge from the general course at the beginning of the second year, have a strong practical bias. An Education Department certificate is granted on the results of an examination held at the end of the third year.

Technical High Schools

Technical high schools combine academic and practical education. While aiming at a general secondary education for their pupils they put special emphasis on various forms of handwork. These schools are not normally co-educational.

Technical high school courses lead to the award of the Intermediate Technical Certificate of the Education Department at the end of the third year, and either the Leaving Technical Certificate or the Leaving Certificate of the P.E.B. in the fourth year. At Adelaide and Whyalla Technical High Schools pupils may also sit for the Matriculation examination of the P.E.B. after five years.

Courses at boys schools include English, science, mathematics, social studies, arts and crafts, technical drawing, woodwork and various forms of metalwork. For more able pupils planning to matriculate, additional academic subjects are available. The particular course that a boy undertakes depends on his interests, ability and aptitude, and also on his plans for tertiary education.

Girls schools teach certain academic subjects, various arts and crafts and commercial practice. All girls schools teach general science leading to physiology in the third year, and a foreign language is available to selected pupils. The arts and crafts subjects include art, dressmaking and home management. Commercial training, which commences in the second year, includes shorthand, typing, book-keeping and business practice. Special secretarial courses are available at Leaving Certificate level in a number of schools.

Area Schools

Area Schools are provided in certain country districts not served by High Schools. They cater for both primary and secondary pupils and are co-educational.

In the first year of secondary education at area schools all pupils take a common course, after which some pupils study a general course on the same lines as those followed in high schools enabling them to sit for the P.E.B. Intermediate and Leaving Examinations thus leading to matriculation (see footnote page 155), while other pupils take a special area school course.

In addition to special courses in English, mathematics, science and social studies, the area school course syllabus includes metalwork, woodwork and art for boys and domestic science, needlework and art for girls. In an increasing number of area schools commercial studies are being introduced, while agricultural science has become a special feature of many of these schools.

In general, third year, and in most schools, fourth year area school courses emphasise rural interests and lead to Intermediate and Leaving Area School Certificates which are awarded by the Education Department.

Special Rural Schools

These schools were first established in remote country areas from the beginning of 1966 with the intention of supplying a limited secondary education in areas where it had been shown that there was an obvious need for secondary education but where the establishment of an area school was not warranted. Currently, they are providing academic studies leading to a P.E.B. Intermediate Certificate as a secondary 'top' to a normal primary school (see footnote page 155).

Correspondence School

Children who are unable to attend any of the aforementioned secondary schools may receive secondary education through the Correspondence School.

Lessons are forwarded to cover nine academic subjects (all to Leaving standard), and also certain drawing subjects. Assistance may take the form of full correspondence or supplementary courses. Supplementary courses are conducted through a primary school Head Teacher, who may, in the case of remoteness from secondary school facilities, conduct grades beyond Grade VII. Correspondence lessons are supplemented by radio lessons from the 'Schools of the Air'.

At 1 August 1967 there were fifty-nine boys and ninety-three girls receiving secondary education through full correspondence courses; of these, fifteen boys and seventeen girls were living in the Northern Territory.

State Secondary Schools, South Australia

At 1 August	High		Technical High		Area (a)		Correspondence Pupils Enrolled (b)	Other Pupils Enrolled (c)
	Number of Schools	Number of Pupils Enrolled	Number of Schools	Number of Pupils Enrolled	Number of Schools	Number of Pupils Enrolled		
1963.....	53	31,860	24	11,891	37	3,547	102	149
1964.....	53	33,964	26	14,033	39	3,936	107	178
1965.....	56	36,115	29	15,479	40	4,078	90	199
1966.....	58	37,376	29	17,033	48	4,307	114	110
1967.....	59	39,541	29	18,508	50	4,754	152	105

(a) Includes also special rural schools from 1966.

(b) Full correspondence pupils only.

(c) Pupils receiving secondary education at primary schools, in Aboriginal schools, and in institutions.

PRIVATE SCHOOLS

Secondary education is also provided by private schools. These schools, for the most part, are identified with various religious denominations. Private secondary schools normally charge fees; however, a limited number of internal scholarships are available and pupils may qualify for certain State scholarships. In addition to normal day attendance many private schools offer boarding facilities for country pupils.

Private schools provide academic courses preparing pupils for the P.E.B. examinations, and this determines their academic curricula for third and subsequent years. Church schools give religious as well as secular education.

Catholic Schools

The Catholic school system provides secondary education at boarding colleges and day schools in metropolitan and country areas.

A special committee of teachers is responsible to the Director of Catholic Education for drawing up syllabuses and for setting external diocesan examinations in all subjects for first and second year pupils. Other years follow the P.E.B. syllabuses. Both general and commercial courses are available to pupils, and home science is taught in some girls schools. An agricultural college for boys is conducted at Mount Gambier where a theoretical and practical study of agriculture is combined with the regular secondary course.

Generally, Catholic secondary schools are the property of the religious communities who conduct them and are supported by the fees charged.

Other Schools

The Church of England, the Methodist Church, the Lutheran Church and the Presbyterian Church all conduct secondary schools for boys and girls in the metropolitan area. Most schools have facilities for boarders.

At boys schools, emphasis is on general academic and commercial courses. Scotch College, Mitcham, however, provides agricultural training for boys along with the normal academic subjects. Girls schools generally provide alternative courses for those pupils not academically inclined. In addition, all these schools offer a wide range of extra-curricular activities.

There are also two non-denominational schools for girls which offer facilities similar to those of the church schools.

Training in typing and shorthand is provided at privately owned business colleges which specialise in this field. A number of these colleges also prepare pupils in certain P.E.B. subjects.

The following tables give details of private schools and cover both primary and secondary education.

Private Schools^(a), South Australia

Year	Number of Schools	Number of Teachers (b)	Pupils on Roll, 1 August				
			Primary		Secondary		Total
			Males	Females	Males	Females	
1963.....	166	1,484	12,015	12,662	6,109	6,245	37,031
1964.....	170	1,560	12,048	12,713	6,261	6,629	37,651
1965.....	172	1,607	11,979	12,626	6,416	6,591	37,612
1966.....	172	1,677	11,756	12,432	6,429	6,570	37,187
1967.....	173	1,711	11,422	12,111	6,749	6,720	37,002

(a) Excluding business colleges.

(b) Includes part-time teachers.

In the next table private pupils are classified according to the denominational affiliation of the school they attended. The predominant contribution of Catholic schools is clearly evident from the table. In 1967 Catholic schools accounted for 82 per cent of primary pupils and 50 per cent of secondary pupils attending private schools.

Pupils at Private Schools, South Australia

At 1 August

Denomination of School	1963	1964	1965	1966	1967
Primary :					
Catholic	20,167	20,308	20,249	19,843	19,253
Church of England	1,929	1,771	1,753	1,738	1,655
Lutheran	875	893	871	933	961
Methodist	560	567	560	544	535
Presbyterian and Baptist/ Congregational	626	665	643	629	625
Seventh Day Adventist	103	116	100	91	129
Undenominational	417	441	429	410	375
Total primary	24,677	24,761	24,605	24,188	23,533
Secondary :					
Catholic	5,988	6,313	6,314	6,369	6,712
Church of England	2,224	2,290	2,409	2,442	2,462
Lutheran	600	603	625	562	583
Methodist	1,337	1,409	1,482	1,516	1,569
Presbyterian and Baptist/ Congregational	1,332	1,308	1,284	1,255	1,275
Seventh Day Adventist	43	32	40	38	48
Undenominational	830	935	853	817	820
Total secondary ...	12,354	12,890	13,007	12,999	13,469

EXAMINATIONS AND SCHOLARSHIPS

Examinations

In addition to internal examinations conducted by the schools there are a number of external examinations which form important stepping-stones in the life of the pupil.

The Progress Certificate is awarded, upon successful completion of the primary course, as evidence of ability to undertake secondary education. This certificate also qualifies the secondary pupil for certain educational allowances, as outlined on page 156. At the end of 1967, 22,541 pupils, approximately 97 per cent of those eligible, received progress Certificates.

After three years secondary study the pupil normally sits for the Intermediate examination of the Public Examinations Board⁽¹⁾, or the Intermediate Technical or Area School examinations of the Education Department. The Leaving, Leaving Technical and Leaving Area School examinations are similarly held at the end of the fourth year.

The Public Examinations Board conducts a further examination at the completion of the fifth year. Prior to 1966 this examination had been known as the Leaving Honours examination and while considered a desirable fore-runner to University study had not been compulsory for entrance to the University of Adelaide, (matriculation being based on the Leaving examination). Commencing with 1966 this examination has become the Matriculation examination.

(1) From 1969 the Public Examinations Board will no longer conduct examinations at the Intermediate level.

Prior to 1966 the Public Examinations Board had given a certificate for a pass in the required number of subjects at either the Intermediate or Leaving examinations and for a pass in one or more subjects in the Leaving Honours examination. From 1966 the Board has issued to each Intermediate, Leaving and Matriculation examinee a certificate showing the grade achieved in each of the subjects in which examined. The total number of candidates for examination by the Board in one or more subjects in 1966 were Intermediate 13,845, Leaving 9,431 and Matriculation 3,317.

Scholarships

The Commonwealth Government, the State Government and various private benefactors provide a variety of scholarships each year for South Australian pupils.

Secondary Scholarships

The Progress Certificate awarded on the completion of primary schooling entitles secondary pupils, whether at State or private schools, to a book allowance of \$16 per annum for the first three years, and \$18 and \$20 for the fourth and fifth years respectively. In 1966-67, \$1,245,663 was paid in progress allowances. Pupils who have to travel considerable distances to the nearest suitable school, or school bus, may also receive travelling expenses or, if forced to live away from home, a boarding allowance. The boarding allowance is \$150 per annum increasing to \$200 in the Matriculation year.

In 1965 the Commonwealth Government introduced Secondary scholarships to cover the last two years of secondary education. These scholarships, of which 976 were available in South Australia in 1968, are awarded on the results of a special Australian Council of Educational Research Examination conducted in July of the third year of secondary education. The scholarships, which are tenable at any approved government or non-government school, are free of a means test and offer a \$200 living allowance, a \$50 book allowance, and up to \$150 re-imbursement for fees paid, in each year. Technical scholarships are offered to pupils in the leaving year on the basis of results in the A.C.E.R. examination and are tenable in approved courses at the South Australian Institute of Technology, the South Australian School of Art and Roseworthy Agricultural College. From the beginning of 1968, these scholarships are also offered to pupils in the matriculation year, to pupils already enrolled in approved courses and to apprentices who are qualified to enrol in an approved course. For full-time study, benefits are the same as the Secondary scholarships; for part-time study, pupils receive \$100 living allowance and a re-imbursement for fees paid. On the last school day of 1967 there were 1,793 pupils studying with the assistance of Secondary scholarships, and a further 318 with technical scholarships.

The State Government offers three classes of exhibitions to encourage pupils to remain at school after the Intermediate (third) year. These exhibitions are awarded, through the Scholarships Section of the Education Department, on the results of the Intermediate examinations of the Public Examinations Board and the Education Department. A predetermined number of exhibitions are reserved each year for country pupils. There are 200 Intermediate exhibitions on P.E.B. certificate results, 60 Intermediate Technical exhibitions on Technical certificate results, and 400 Continuation exhibitions on P.E.B. or Area School certificate results awarded annually. Intermediate and Continuation exhibitions pay \$50 for the fourth year and \$60 for the fifth year of secondary education, Intermediate Technical exhibitions pay \$50 for the fourth year only.

The Education Department also awards teaching scholarships (see pages 171-2).

The Commonwealth Government, through the Soldiers' Children Education Scheme, offers assistance at the secondary level to children of ex-servicemen whose death, blindness or total and permanent incapacity was the result of war service. Eligible children, upon reaching twelve years of age, qualify for a fortnightly allowance while attending school. Where appropriate, a living-away-from-home allowance is also paid, and the payment of allowances is subject to satisfactory attendance and progress. At 1 January 1968 weekly allowances were \$1.90 at ages twelve and thirteen, \$2.88 at ages fourteen and fifteen and \$6.32 at ages sixteen and over, if living at home, and \$6.32 at ages twelve to fifteen, and \$9.78 at ages sixteen and over if living away from home. Pupils aged sixteen and over whose father died before they turned sixteen receive \$7.28 if living at home or \$14.48 if living away from home. The pupil receives guidance and advice on his course of studies from the Soldiers' Children Education Board.

Government scholarships are tenable at both State and private schools, however, the latter also award a limited number of internal scholarships carrying free tuition. The Scholarships Section of the Education Department also administers a number of privately endowed scholarships.

Tertiary Scholarships

The Commonwealth Government, through the Commonwealth Scholarships Board, each year offers two types of scholarships at the tertiary level; University scholarships and Advanced Education scholarships. University scholarships are tenable only in approved University courses and are either Open Entrance scholarships, Later Year scholarships or Mature Age scholarships. Advanced Education scholarships are tenable only in approved non-university tertiary courses at the South Australian Institute of Technology, Roseworthy Agricultural College, Education Department Teacher Training Colleges, and the Kindergarten Training College; these are either Open Entrance or Later Year scholarships.

Commonwealth Scholarships, South Australia^(a)

Year	New Awards Accepted			Students in Training at 30 June	Expenditure (Year ending 30 June)		
	University	Advanced Education	Total		Fees	Living Allowance	Total
					\$	\$	\$
1963.....	<i>n.a.</i>	<i>n.a.</i>	468	1,204	249,038	235,316	484,354
1964.....	<i>n.a.</i>	<i>n.a.</i>	590	1,335	327,474	244,106	571,580
1965.....	<i>n.a.</i>	<i>n.a.</i>	634	1,538	326,226	417,624	743,850
1966.....	821	113	934	1,827	561,161	325,780	886,941
1967.....	484	32	516	2,343	652,478	413,883	1,066,361

(a) Includes pupils who live in Northern Territory and sit for the P.E.B. examinations.

n.a.—Not applicable.

Students awarded a Commonwealth scholarship are entitled to the payment of certain fees and allowances without a means test. In addition, full-time students may be granted a living allowance in accordance with a prescribed means test. At 1 January 1968 the maximum annual allowance was \$559 for a student living at home and \$904.80 for a student living away from home.

Students under the Soldiers' Children Education Scheme may receive a basic allowance of \$10.75 per week while undergoing tertiary education. Additional allowances are paid if living away from home or if supporting a family. All fees are paid and the student is reimbursed for fares, text books and equipment.

Students undergoing industrial training receive a basic allowance of \$2.30 per week plus the other benefits.

Soldiers' Children Education Scheme, South Australia^(a)

Year	Number of Beneficiaries in Training (b)				Expenditure on Benefits		
	Primary and Secondary	Tertiary	Industrial	Total	Allowances	Fees, Books, Equipment and Fares	Total
					\$	\$	\$
1962-63 ..	689	115	92	896	158,536	33,068	191,604
1963-64 ..	680	118	114	912	184,072	29,452	213,524
1964-65 ..	678	150	127	955	176,722	42,452	219,174
1965-66 ..	636	128	136	900	189,973	43,848	233,821
1966-67 ..	629	126	131	886	182,131	50,805	232,936

(a) Includes Northern Territory.

(b) Beneficiaries twelve years and over. Number at end of year.

The University of Adelaide and the Flinders University award a number of prizes, grants and scholarships each year, details of which are given in the Calendars of the respective Universities. Many students also receive assistance at the tertiary level through studentships offered by government departments and private firms (for teaching studentships see pages 171-2).

The South Australian Government's Fees Concession Scheme provides financial assistance in the form of a loan only or of a combination of loan and grant to eligible students (at the Universities or undertaking tertiary courses at the South Australian Institute of Technology) whose fees are not met by scholarships, cadetships, or similar awards or by employers. Eligibility for and the amount of assistance are determined in accordance with a prescribed means test. The nature of the course determines the form of assistance.

A number of adults receive training through three Commonwealth Training Schemes currently operating in South Australia. The schemes, the Korea and Malaya Training Scheme, the Disabled Members and Widows Training Scheme, and the Social Services Training Scheme, are administered by the Technical Branch of the Education Department.

TERTIARY EDUCATION

THE UNIVERSITY OF ADELAIDE

The University was founded by Act of Parliament in 1874 and began its academic work in 1876. From its inception it admitted women on equality with men. Its original staff was four professors, three part-time lecturers and a registrar-librarian. Students in 1876 numbered eight undergraduates and fifty-two others, and the curriculum was confined to arts and science. Within a decade law, music and medicine were added; in 1888 studies in engineering were instituted in collaboration with the South Australian School of Mines and Industries; and at the turn of the century the University broke new ground for Australian universities by founding a conservatorium of music and by instituting studies in

commercial subjects. Between the two wars the Waite Agricultural Research Institute and faculties of dentistry and economics were established, studies in agricultural science and engineering greatly developed, and diploma courses in pharmacy, public administration and physical education instituted.

Forseeing that growth on its small city site would be severely restricted by 1966, the University planned extension of its work to a new site at Bedford Park with a separate staff and over 400 first-year students in arts and science and some post-graduate students in that year. The State Government, however, decided to make the institution at Bedford Park an independent university, and The Flinders University of South Australia was formally constituted on 1 July 1966.

The governing body of the University of Adelaide is the Council, comprising the Chancellor and the Vice-Chancellor (*ex officio*), twenty members elected by the graduates of the University of at least three years standing, and five members appointed by Parliament. The principal advisory committees of the Council are the Education Committee and the Finance Committee each of which is appointed by the Council. There is also the usual University structure of faculties, boards of studies and special committees to advise on particular aspects of the University's work.

As can be seen from the following table the University is largely supported by Government grants; they constituted 84 per cent of total revenue and capital receipts for 1966 while student fees yielded less than 14 per cent.

The University of Adelaide^(a), Finance

Particulars	1962	1963	1964	1965	1966
	S'000				
Revenue :					
Government Grants :					
State	2,879	3,072	3,797	4,480	4,149
Commonwealth	1,844	2,005	2,407	2,769	2,953
Fees	490	718	792	1,160	1,227
Interest and Dividends	69	117	104	114	123
Other Income	50	69	77	80	49
Total	5,333	5,982	7,177	8,603	8,501
Expenditure	5,324	6,029	7,770	7,908	8,469
Capital Receipts :					
State	819	878	1,060	185	316
Commonwealth	819	878	1,060	185	316
Capital Expenditure	1,275	2,489	1,667	393	615
Net Increase in Endowments	49	68	17	188	165

(a) Includes Waite Agricultural Research Institute.

In 1967 the University had 11 faculties: arts (10 departments); economics (2); science (14); agricultural science (6); engineering (4); medicine (7); law; music; dentistry; architecture and town planning; and technology and applied science. It also provided diploma courses in physical education, physiotherapy, and public administration. Higher degrees were provided in all faculties except technology.

Intending students are normally required to have passed the Matriculation examination in a prescribed range of subjects. Interstate and overseas students, however, may be accepted on alternative qualifications.

The period of study ranges from three years for certain degree and diploma courses to six years for medicine. Fees for full-time students were increased for 1968 to approximately \$345 a year a student taking an Arts-type course, \$390 a year for a Science-type course, and \$420 a year for dentistry and medicine. These fees entitle students to tuition and access to the Library and to the various facilities of the University Union and the Sports Association. Students, however, may obtain financial assistance in a number of ways; see pages 157-8. Provision is also made in certain faculties for part-time students who pay reduced fees.

The original full-time academic staff of four in 1876 had grown by the end of 1967 to 68 professors, 56 readers, 154 senior lecturers, 183 lecturers, and 75 tutors and demonstrators. Teaching by part-time staff amounted in 1967 to 48,900 hours. Part-time staff were mainly engaged in large first-year classes involving laboratory work in the faculties of engineering, law, medicine and dentistry, and in the physiotherapy course.

During the last decade significant changes have occurred in the composition of the student body. The proportion of full-time students has steadily risen, and the proportion taking diploma courses and part-time studies steadily declined. The most significant change, however, has been in the numbers of students proceeding to honours and higher degrees; here the rate of growth is double that of undergraduate enrolments. Details of student enrolments are given in the next two tables.

The University of Adelaide, Enrolments^(a)

Course	1963	1964	1965	1966	1967
Higher Degree candidates	464	535	606	649	727
Undergraduate, diploma, certificate and miscellaneous students:					
Agricultural Science	94	89	105	147	139
Applied Science	65	74	86	111	172
Architecture	126	148	184	196	186
Arts	2,372	2,731	2,770	2,775	2,640
Dentistry	117	164	188	217	211
Economics	458	521	557	539	459
Engineering	426	430	464	536	542
Law	266	336	382	392	359
Medicine	619	640	640	593	634
Music	54	57	57	60	73
Pharmacy (Degree)	(b)	(b)	59	85	142
Science	1,180	1,297	1,436	1,466	1,436
Technology	578	594	585	672	656
Pharmacy (Diploma)	210	204	143	128	56
Physical Education	133	138	131	150	134
Physiotherapy	85	81	81	91	94
Social Studies	118	135	175	106	68
Miscellaneous (S.A.I.T.) (c) ..	51	29	9	34	100
Elder Conservatorium (d) ..	415	431	452	434	339
Total	7,831	8,634	9,110	9,381	9,167

(a) Each student is counted once only; in the category appropriate to his principal course.

(b) Pharmacy degree course introduced in 1965.

(c) Students enrolled in subjects as part of a diploma course at the South Australian Institute of Technology.

(d) Students not also enrolled for degree or diploma subjects.

The University of Adelaide, Enrolments^(a), 1967

Course	New Students	All Students			
		Full-time	Part-time	External	Total
Higher Degree candidates	59	335	207	185	727
Undergraduate, diploma, certificate and miscellaneous students:					
Agricultural Science	28	126	13	—	139
Applied Science	78	115	57	—	172
Architecture	26	145	41	—	186
Arts	471	1,174	1,265	201	2,640
Dentistry	31	194	17	—	211
Economics	95	180	277	2	459
Engineering	128	505	37	—	542
Law	85	301	58	—	359
Medicine	124	622	12	—	634
Music	17	60	13	—	73
Pharmacy (Degree)	50	121	21	—	142
Science	354	1,087	348	1	1,436
Technology	134	290	366	—	656
Pharmacy (Diploma)	—	53	3	—	56
Physical Education	26	112	17	5	134
Physiotherapy	23	94	—	—	94
Social Studies	—	45	23	—	68
Miscellaneous (S.A.I.T.) ^(b) ..	80	1	99	—	100
Elder Conservatorium ^(c) ...	101	—	339	—	339
Total	1,910	5,560	3,213	394	9,167

(a) Each student is counted once only; in the category appropriate to his principal course.

(b) Students enrolled in subjects as part of a diploma course at the South Australian Institute of Technology.

(c) Students not also enrolled for degree or diploma subjects.

From its inception until the end of 1967 the University had conferred 14,521 degrees and 5,926 diplomas by examination. The growth of the University in recent years is indicated by the number of degrees and diplomas awarded in 1967 which totalled 1,353.

The over-all controlling body of student activities outside the classroom is the Union Council, comprised of representatives of the students, graduates, staff and Council of the University. The Union Council receives the annual fee \$45 (pro rata for part-time students) payable by all students proceeding to a degree or diploma; from this income it makes grants to the Sports Association for the maintenance of some thirty-three sporting clubs and to the Students' Representative Council for the support of some fifty student societies. It is also responsible for the Union buildings, including the three refectories and Union Hall. The Union buildings aggregate about 48,500 sq ft of floor space; the playing fields available to the Sports Association cover about 60 acres.

The residential colleges are independent bodies affiliated with the University. The three colleges for men were founded by churches, but impose no denominational restrictions on admission; the womens college has no denominational affiliation. All four are situated in North Adelaide within easy walking distance of the University. Their names, church affiliations, years of founding and residential capacities are:

St Mark's	Anglican	1925	146 students,	7 tutors
St Ann's	Non-denominational ..	1947	107 students,	8 tutors
Aquinas	Catholic	1948	95 students,	18 tutors
Lincoln	Methodist	1952	125 students,	8 tutors

At the beginning of 1968 a fifth residential college, Kathleen Lumley College, was established for post-graduate students.

The Library

The central library of the University is named the Barr Smith Library in honour of its original benefactor, Robert Barr Smith, who during the first twenty-five years of the University's existence provided \$40,000 for books, and of his son, Tom Elder Barr Smith, who provided the first part of the present building at a cost of nearly \$70,000.

In addition to the central library there are branch libraries for law, medicine, music and the Waite Institute. The medical library incorporates the library of the South Australian Branch of the Australian Medical Association. Borrowing facilities are available to staff, students and graduates.

Holdings at the end of 1967 were as follows: central library about 356,500 volumes; law library 21,000; medical library 54,000; music library 5,000 (and about 10,000 pieces of music in sheets); and the Waite Institute library 22,500, making a total holding of about 459,000 volumes.

During 1967 the library made 171,000 loans to students, staff and graduates; 13,500 to other libraries in South Australia; and 4,000 to libraries in other States. It received 1,100 loans from other libraries. Accessions totalled 31,360 and withdrawals numbered 1,221. Serial titles received regularly exceeded 15,000. Expenditure on staff, books, journals, binding and other specifically library work amounted to \$520,000, or 5.7 per cent of total university revenue expenditure.

The Waite Agricultural Research Institute

The Waite Agricultural Research Institute was established, within the University of Adelaide, in 1924. The foundation of the Waite Institute was made possible by a gift of land and property at Glen Osmond together with an endowment from a wealthy pastoralist, Mr. Peter Waite. The Institute has received a number of endowments subsequent to this original gift and these have been used to assist in the establishment of additional laboratories and other research and teaching facilities. A recent gift of about 700 acres of land at Mintaro, near Clare, has enabled the development of the Mortlock Experiment Station which provides additional field facilities for the Institute for its research and post-graduate training programmes in the animal, pasture, and crop sciences.

The finance of the Institute is now drawn in large measure from grants made annually by the Commonwealth and State governments, on the basis of recommendations by the Australian Universities Commission. Research programmes at the Institute have also attracted a very satisfactory measure of support from other sources, notably primary industry bodies such as the Australian Wool Board, the Wheat Industry Research Council, Wheat Industry Research Committee of South Australia, Barley Improvement Trust Fund and the Australian Meat Research Committee. Between 20 and 25 per cent of the total Waite Institute budget of \$1,600,000 in 1968 comes from these sources.

The Institute contains the following six departments, each under the leadership of a professor, viz Agricultural Biochemistry and Soil Science, Agronomy, Animal Physiology, Entomology, Plant Pathology and Plant Physiology. Until recent years, the Institute has centred its research and teaching activities on the plant and soil sciences. Recognition of the growing importance of the livestock industries in Australia led, a few years ago, to the introduction of animal studies and this development has now been firmly entrenched by the establishment in 1964 of the new Department of Animal Physiology.

The six departments are responsible for teaching the last two years of the four year undergraduate course leading to the degree of Bachelor of Agricultural Science, the first two years being provided by appropriate science departments of the University. The Waite Institute is noted for the development and maintenance of a strong post-graduate school in which students from all over Australia and many countries overseas, particularly British Commonwealth countries, are enrolled.

The Elder Conservatorium of Music

The University established a Chair of Music in 1884 and, enabled to do so by an endowment by Sir Thomas Elder, a Conservatorium of Music in 1968. In addition to full degree courses in practical studies, musicology, and composition the University School of Music provides instruction in the various branches of musical performance for part-time students. Tuition in practical studies is given on an individual personal basis.

Concert experience for students is provided through regular informal concerts internal to the Conservatorium and by public concerts given from time to time. The University Music Society arranges each year a series of night concerts by members of the staff, who provide also a series of Sunday afternoon public concerts and recitals during the winter months.

In 1967 there were seventy-three students proceeding to the degree of B.Mus. and 339 students taking single-subject practical studies.

THE FLINDERS UNIVERSITY OF SOUTH AUSTRALIA

During 1958 when the University of Adelaide began to plan two major new buildings on its existing 30 acre site it became apparent that no further large buildings could be erected on the site and that any further expansion would have to take place elsewhere.

Early in 1961 the South Australian Government indicated that it would make available to the University of Adelaide an area at Bedford Park, of some 370 acres, situated about seven miles from the centre of Adelaide in the foothills of the Mount Lofty Ranges. Consequently the University of Adelaide made a submission for financial support for Bedford Park to the Australian Universities Commission in 1962, which gave approval for the planning of Bedford Park. The institution became known as 'The University of Adelaide at Bedford Park'. Towards the end of 1965 the South Australian Government decided to make The University of Adelaide at Bedford Park a fully autonomous university under the name 'The Flinders University of South Australia', after the great explorer and hydrographer, Matthew Flinders.

The Flinders University of South Australia Act came into force on 1 July 1966. The Act placed the whole management of the University in the hands of a Council with powers to make Statutes and Regulations subject to the approval of the Governor-in-Council. After 1971, they will also be subject to the approval of Convocation, which will comprise the graduates of the University and such other members as the Council may determine. The Council comprises twenty-seven members: The Chancellor; the Vice-Chancellor; the Director-General of Education; five members of Parliament elected by Parliament; a nominee each of the Chambers of Manufactures and Commerce jointly; the Trades and Labor Council; and the Government; two professors and two non-professorial academic staff members elected by the academic staff; the President of the Students Representative Council; eight members elected by Convocation; and up to three members co-opted by the Council.

Erection of the initial buildings commenced late in 1964 and was completed progressively over the period October 1965 to February 1966. These buildings were designed to cope with an enrolment of rather less than 1,000 students. A continuous building programme over the years 1967 to 1969 inclusive will increase the University's capacity to about 1,800 students. A hall of residence, which had been planned as one of the first buildings to be completed, has been delayed because approval for the necessary expenditure has not yet been given.

Details of revenue and expenditure for the period 1964-68 are shown in the following table.

The Flinders University of South Australia, Revenue and Expenditure

Particulars	1964	1965	1966	1967	1968 (a)
	\$'000				
Capital Revenue:					
Government Grants;					
State	555	1,755	559	943	751
Commonwealth	555	1,755	553	943	751
Other	16	4	73	—	—
Total	1,126	3,514	1,185	1,886	1,502
Current Revenue:					
Government Grants;					
State	208	382	753	1,245	1,463
Commonwealth	112	208	458	732	882
Fees	—	—	63	108	170
Other	—	—	1	12	11
Total	320	590	1,275	2,097	2,526
Capital Expenditure	868	3,741	1,183	1,620	1,568
Current Expenditure	322	590	1,278	2,074	2,505

(a) Estimated.

On 25 March 1966, Her Majesty Queen Elizabeth the Queen Mother officially opened the University.

The first academic year of the University began on 7 March 1966, with enrolments of 382 first-year under-graduates and 35 graduate students. Details of enrolments for the years 1966, 1967 and 1968 are shown in the following tables.

The Flinders University of South Australia, Enrolments

Course	1966	1967	1968
Arts	178	386	557
Science (a)	204	321	407
Economics	—	46	91
Education	—	—	45
Higher Degree	26	61	95
Post-graduate diploma	9	15	17
Total	417	829	1,212

(a) Includes 70, 73 and 73 students for 1966, 1967 and 1968 respectively transferring to the University of Adelaide at the conclusion of their first year.

The Flinders University of South Australia, Enrolments, 1968

Course	New Students	All Students		
		Full-time	Part-time	Total
Arts	277	482	75	557
Science	225	389	18	407
Economics	46	74	17	91
Education	—	44	1	45
Higher degree	41	62	33	95
Post-graduate diploma	8	15	2	17
Total	597	1,066	146	1,212

Academic Organisation

The academic organisation was planned in terms of 'Schools' instead of faculties or departments. The School is the basic academic and administrative unit with one of the professors of each School appointed to act as the Chairman of the School.

The advantages of this system include the creation of small numbers of units, each containing a number of senior members of academic staff, the encouragement of inter-disciplinary work, and the covering of highly specialised or less usual subjects without the creation of separate departments for them. The Schools are also physical entities and because students pursue courses mainly in one School it is hoped that this will induce a sense of 'belonging' to a School which traditionally has been lacking in students taking courses in several different departments. At present there are four schools: the Schools of Language and Literature; Social Sciences; Physical Sciences; and Biological Sciences. The School of Biological Sciences is highly integrated. There are no divisions into the traditional disciplines of botany, zoology, micro-biology, etc.; the emphasis is on the manner in which the teaching and research are organised, *e.g.* cellular biology, molecular biology. The remaining schools have a total of nineteen disciplines established within them. At the beginning of 1968, full-time academic staff numbered 121.

The Library

The Librarian was appointed in 1963 and the Library opened in 1966 with approximately 60,000 volumes and subscriptions to some 1,800 serials and with a staff of twenty-nine. At the beginning of the 1968 academic year there were 104,000 volumes, subscriptions to 3,300 serials and a staff of thirty-six.

Admission to the University

Students must have qualified for matriculation by passing the Matriculation Examination of the Public Examinations Board in a prescribed manner, and must be selected by the University. Flinders University and the University of Adelaide have established a Universities Admissions Office to which all students wishing to enter either University must apply for admission. Selection for admission is based, as far as practicable, on academic merit.

Annual fees are \$288 for Arts and Economics students, \$348 for Science students and \$144 for higher degree students. All full-time students also pay a union fee of \$39 a year for membership of the Union and for participation in its activities.

Degrees Offered

The University offers the following degrees; Batchelor of Arts, Bachelor of Economics, Bachelor of Education, Bachelor of Science, Master of Arts, Master of Economics, Master of Education, Master of Science, Doctor of Philosophy, Doctor of Letters and Doctor of Science. In addition there are post-graduate Diplomas in Social Administration and in Education.

The structure of the degree course in Arts and Science differs materially from those in most other Australian universities. The degree courses are built upon the principle of offering the students a choice of a limited number of 'programmes', rather than allowing students to aggregate credits for individual subjects. The programmes are designed so that a student will pursue the major part of his studies within one School.

The Bedford Park Teachers College

The Bedford Park Teachers College has been developed on a site of twenty acres adjoining the University site. As a result of early discussions between the University and the Education Department concerning the relationship of the College to the University, most of the students at the Teachers College are university students. In order to foster a close relationship between the work of the College and the University, a joint appointment has been made as Principal of the Bedford Park Teachers College and Professor of Education in the School of Social Sciences. Legislation to enable this arrangement was passed by the South Australian Parliament in 1965, and the Professor-Principal was appointed in 1966.

The Horace Lamb Centre for Oceanographical Research

In 1965, the University established an oceanographical research centre, which is now known as The Horace Lamb Centre for Oceanographical Research, after the distinguished mathematician who was Professor of Mathematics in The University of Adelaide from 1875 to 1885 and eminent for his work in hydrodynamics. The Centre provides under-graduate and graduate training in oceanography and its present interests are in physical, chemical and geological oceanography, and meteorology. Its investigations are related particularly to some of the problems of the Southern Ocean. The Centre has two field stations, one on the Coorong and the other at Cape du Couedic, Kangaroo Island.

A more detailed history of the Flinders University was given on pages 163-8 of the *South Australian Year Book* 1967.

THE SOUTH AUSTRALIAN INSTITUTE OF TECHNOLOGY

The South Australian Institute of Technology, which pioneered technical education in South Australia, was established in 1889 as the South Australian School of Mines and Industries. The School of Mines, as it became generally known, was set up under an Act of Parliament and rapidly grew in stature and reputation. In 1960, it was renamed the South Australian Institute of Technology.

From earliest times there had been co-operation between the University of Adelaide and the School of Mines, and in 1903 joint engineering courses were established. An important development in the history of technical education came

in 1957 with an agreement between these institutions whereby certain courses of study at the School would lead to the Degree of Bachelor of Technology at the University. Other degree courses have subsequently been introduced.

Although independent of the Education Department, the Institute maintains a close and harmonious relationship with the Department, and since 1959 there has been a progressive transfer of control of activities between the two. Classes up to and including matriculation level and some trade classes have been transferred to the control of the Education Department, as was the Adelaide Technical High School in September 1963. This has enabled the Institute to expand its work in the professional and semi-professional fields, including the assumption of control of the technical training centres at Whyalla and Port Pirie in 1962.

The Institute is administered by a council appointed by the Governor. The council has complete authority within the limits of the finance placed at its disposal and for which it is responsible annually to Parliament. The autonomy provided by this feature of control makes the Institute unique among Australian technical institutes.

In 1967 government aid represented 81 per cent of the Institute's receipts. Financial details for this and earlier years are given in the following table.

South Australian Institute of Technology, Revenue and Expenditure

Particulars	1963	1964	1965	1966	1967
	\$'000				
Receipts :					
Government aid	1,001	1,692	1,644	2,351	2,855
Student fees	290	314	442	489	564
Other	205	414	72	75	90
Total	1,496	2,421	2,158	2,915	3,509
Expenditure :					
Salaries	986	1,077	1,484	1,442	1,635
Other	430	1,016	698	1,170	1,373
Total	1,416	2,093	2,182	2,612	3,008

A wide range of courses and subjects to varying levels is offered; many courses lead to the award of a degree by the University or a diploma or certificate by the Institute. In 1967 the Institute offered thirteen degree courses including engineering courses leading to a degree in technology, courses in chemical technology and metallurgy for a degree in applied science and a degree course in pharmacy.

Diploma and certificate courses applicable to local needs are conducted at the Whyalla division of the Institute and other courses are conducted at Port Pirie and Woomera.

In 1967 the Institute conducted about 800 classes.

Of the 10,637 individuals enrolled in 1967, 2,890 were taking professional courses, 615 semi-professional courses and 3,143 technician level courses. The remaining 3,989 students were enrolled in the many single subject classes such as dressmaking, home science, millinery, welding, etc.

The majority of students attending the Institute do so on a part-time basis.

South Australian Institute of Technology, Students and Staff

Particulars	1962	1963	1964	1965	1966	1967
Students :						
Individual enrolments	11,170	11,114	10,690	11,239	11,393	10,637
Subject enrolments	16,859	17,073	17,443	18,269	19,370	20,360
Teaching staff :						
Full-time.....	164	170	139	162	157	166
Part-time	246	268	341	243	272	335

TECHNICAL CORRESPONDENCE SCHOOL

The Technical Correspondence School provides correspondence courses in a wide range of subjects. Students may receive tuition in Public Examination Board subjects, certain University subjects, and in certain subjects analogous to those of the Institute of Technology. The school also provides trade school courses for apprentices, various accounting and commercial courses and a wide variety of specialist and leisure interest courses. Tuition for certain prisoners at Yatala and other gaols is conducted through the school.

In 1967 there were 5,818 persons, including 768 apprentices, enrolled with the Technical Correspondence School.

ROSEWORTHY AGRICULTURAL COLLEGE

Roseworthy Agricultural College was opened to students in 1885 and thus ranks as the oldest of Australian agricultural colleges. Admission is limited to young men over sixteen years of age who have reached a satisfactory level of secondary education. There is a strong practical bias to the course and almost half of the graduating students take responsible positions on farming or pastoral properties. Research and experimental work applicable to the area is conducted and the college is also involved in the production of pure seed of wheat and oat varieties suitable to South Australia. A major wheat and oat breeding programme is also conducted.

The college is situated thirty-two miles north of Adelaide in better class mallee country, the average annual rainfall being 17.1 inches. The total area of the college farm is 2,573 acres. Buildings, grounds, vineyard and orchard occupy about 100 acres. Nine hundred acres are cropped annually and about 400 acres are fallowed. Studs are conducted for cattle (Jersey and Polled Shorthorn), sheep (Merino and Southdown), and pigs (Berkshire).

A special course in oenology is conducted leading to a Roseworthy diploma. Australia's wine technologists are trained at Roseworthy and a small wine cellar is part of the establishment.

At 30 June 1967 there were 111 students enrolled at the college.

SOUTH AUSTRALIAN SCHOOL OF ART

The South Australian School of Art has the longest continuous history of any technical art school in Australia, having been established as a School of Design in 1861 under the control of the South Australian Society of Arts and transferred in 1909 to the Education Department as the South Australian School of Arts and Crafts. The present name was adopted in 1958. The School conducts full-time courses leading to the Diploma of Art in Fine Arts, Advertising Art and Art Teaching, while classes in related subjects are also provided for part-time students.

The Diploma in Art Teaching is a three year course, the art education section of which is provided at the School of Art. Other diploma courses are of four years with a study of specialised subjects following a common first-year course.

During 1967, 378 full-time diploma students and 687 part-time students enrolled at the School.

TRADE EDUCATION

The Apprentices Act, 1950-1966, requires apprentices to attend schools or undertake correspondence courses for a minimum of three years of their indenture period.

To provide training for apprentices the Education Department has four technical colleges, which embrace nine separate technical institutions (formerly known as trade schools) in the metropolitan area. Classes are also conducted at Port Pirie, Whyalla, Port Augusta and Mount Gambier, and many apprentices are catered for through the Technical Correspondence School.

Although the Act only requires apprentices to attend technical college for three years, facilities are provided for those showing ability to attend for a fourth and fifth year. All metropolitan technical colleges also provide advanced courses for adult tradesmen and others employed in industry.

The technical college curriculum covers about 160 subjects related to forty-four trades. While many of these subjects form part of the requirements for the Advanced Trade Certificate, the others are designed to meet special demands for training in new processes and techniques.

Since 1960 the Commonwealth Development Bank has awarded Post-Apprenticeship Scholarships annually to financially assist young tradesmen and outstanding apprentices to further their education and technical qualifications. The scholarship scheme is administered on behalf of the Bank by the Australian Apprenticeship Advisory Committee. Eight of these scholarships were awarded to South Australians for 1968.

Trade Education, South Australia
Number of Apprentices Enrolled in December

Schools	1963	1964	1965	1966	1967
Metropolitan technical colleges ..	4,712	5,553	5,983	6,551	6,398
Country technical schools	559	619	672	723	753
Technical Correspondence School (a)	652	656	721	735	768
Total	5,923	6,828	7,376	8,009	7,919

(a) Includes Northern Territory apprentices.

ADULT EDUCATION

Education Department: Adult Education

The Education Department provides adult education for part-time students in country areas through its eleven adult education centres (two of which are in the Northern Territory), the Whyalla Technical High School, and the Port Pirie, Port Augusta and Mount Gambier Technical Colleges—with branch classes conducted in 178 towns. In the metropolitan area classes are held at twenty-six

technical high schools, all the technical colleges, the School of Art and the Adelaide Woodwork School. A full-time centre was established early in 1968 at Norwood where both day and evening classes are conducted. Adult education is also available through the Technical Correspondence School.

The 360 subjects currently available to adult classes include academic subjects up to matriculation standard and beyond, technical subjects for apprentices and adult tradesmen, commercial and other vocational subjects, art and craft subjects, and a wide range of cultural activities.

Education Department, Adult Education

Number of Subject Enrolments

Centres	1964	1965	1966	1967
Country	13,797	16,629	16,907	16,354
Metropolitan :				
South Australian School of Art	627	648	898	902
Technical Colleges	3,010	2,707	3,577	3,723
Technical High Schools	10,037	12,396	13,350	15,722
Technical Correspondence School ...	5,159	5,213	5,557	6,215
Adelaide Woodwork School	207	274	320	421
Total	32,837	37,867	40,609	43,337

Workers Educational Association of South Australia

The Workers Educational Association of South Australia was established in 1914. Patterned on the English W.E.A., it is a voluntary adult education organisation which works in close co-operation with the University of Adelaide's Department of Adult Education. Activities it organises directly, or in which it provides major assistance to other bodies, include a comprehensive day and evening class programme, postal courses for trade unionists, an international adult and childrens film festival, adult education courses on television and a short-period residential college.

It possesses a residential college at Goolwa, an adult education centre in the city, and a bookshop in the University grounds which provides books for University and W.E.A. students.

In 1967 there were 68 classes with a total enrolment of 3,619 students organised independently by the W.E.A., and a further 60 classes with an enrolment of 2,086 were organised by the W.E.A. in association with the University.

University of Adelaide: Department of Adult Education

Adult education classes were started by the University in 1917, and in 1957 a Department of Adult Education was established.

The Department, largely in association with the Workers Educational Association, provides tutorial classes and lecture classes in a wide range of subjects. A library is available to students of these classes. The Department also organises study circles, discussions and seminars in a number of subjects, and lectures, discussion groups, music recitals and art exhibitions are arranged in country centres. A summer school for adults is conducted annually.

In 1963 television was introduced as a medium for adult education.

Aggregate enrolments for 1967 were 1,670 in courses, schools and conferences (exclusive of one day schools, two day courses and single lectures) arranged independently by the Department, and 2,086 in classes arranged jointly with the W.E.A.

Migrant Education

The Education Department on behalf of the Commonwealth Government conducts classes for migrants who have an inadequate command of the English language. These classes are held at many metropolitan and country centres including migrant reception centres. Tuition is also provided through correspondence courses and radio lessons.

A field officer visits individuals and families in their homes or places of employment to acquaint them with the opportunities for learning English, and to offer to enrol them in one of the classes.

In 1967, 3,450 persons enrolled or re-enrolled for English classes and a further 1,707 took correspondence lessons.

TEACHER TRAINING

Kindergarten

The Kindergarten Training College is under the control of the Kindergarten Union of South Australia (Inc.).

Trainees undertake a three year course which includes lectures in a wide variety of subjects in addition to practical experience at kindergartens. Trainees may be granted training allowances by the Kindergarten Union (subject to a bond) or may enter as private students. Upon completion of the course trainees are awarded a diploma.

Trainees also benefit from the facilities of the Lady Gowrie Child Centre which is equipped for observational and experimental work with pre-school children, and is associated with the Kindergarten Union through the Australian Pre-School Association.

Kindergarten Training College, South Australia

At 31 December	Lecturers		Student Teachers
	Full-time	Part-time	
1962 (a)	4	17	64
1963	5	17	61
1964	5	11	70
1965	5	7	77
1966	6	12	93

(a) At 31 August.

Education Department

The Education Department conducts training schools for teachers at Adelaide Teachers College, Wattle Park Teachers College, Western Teachers College and Bedford Park Teachers College. Courses are related to the various levels of education or to specialised fields. Infant and primary teachers are trained at Wattle Park, Western and Bedford Park Teachers Colleges, specialist secondary teachers at Western and Adelaide Teachers Colleges, and secondary trainees are generally attached to the Adelaide and Bedford Park Teachers Colleges which are situated adjacent to the University of Adelaide and the Flinders University of South Australia respectively.

The normal training period for infant and primary teachers is two years. Certain infant and primary teachers, after having completed their normal training, may attend special courses to equip them for teaching handicapped children. Courses for secondary teachers are usually of four years. In addition to the general secondary course there are also specialist courses for teachers of commercial subjects, agriculture, music, physical education, art, home science and crafts.

External facilities, as well as those of the colleges, are used in the training of teachers. Secondary trainees have the opportunity of completing a university degree, and infant and primary training may involve some study at a University. In addition, the facilities of the Institute of Technology, Roseworthy Agricultural College, Waite Institute, the Elder Conservatorium of Music and the South Australian School of Art are used in the training of specialist teachers. Trainees also attend at certain schools where they observe skilled teachers at work and where they gain practical experience through the preparation and presentation of lessons.

Trainees may enter the colleges as private students; the majority, however, receive free tuition and allowances while training in return for a three year bond with the Education Department. To assist intending trainees in attaining the necessary entrance qualifications the Department offers teaching scholarships.

Students at Teachers Colleges^(a), South Australia

Classification	1963	1964	1965	1966	1967
Infant	344	343	351	388	414
Primary	1,056	1,141	1,142	1,150	1,214
Secondary :					
General (b)	832	997	1,070	1,232	1,269
Specialist (c)	503	587	600	676	692
Total	2,735	3,068	3,163	3,446	3,589

(a) Number of students attending for whole or part of the year.

(b) Includes agriculture and music teachers.

(c) Includes commercial, physical education, craft and art teachers.

Private Schools

In the Catholic school system only one religious order, the Sisters of Mercy, receives its training in South Australia. These Sisters attend the Education Department training colleges and the University of Adelaide. Other teaching personnel receive their training interstate.

Other private schools do not normally train their own teachers but employ persons considered to be suitably qualified.

STATE EXPENDITURE ON EDUCATION

Details of expenditure by the State Government on education in recent years are given below. The considerable increase in annual expenditure shown in the table has been a continuous process since the end of the 1939-45 War. In 1946-47

Government expenditure from revenue on education was \$4 million with a further \$112,000 of loan funds devoted to the construction and maintenance of schools.

State Expenditure on Education, South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Expenditure from Consolidated Revenue:					
Primary	15,055	16,562	18,006	19,539	22,279
Secondary	7,838	8,691	9,530	10,573	11,843
Technical (a)	6,039	7,357	8,401	10,010	11,006
Kindergarten Union grants ..	370	390	427	455	499
University grants	6,233	7,077	9,254	11,030	8,628
Waite Agricultural Research Institute	700	824	1,040	1,080	1,064
Roseworthy Agricultural College	257	271	291	300	322
Pensions	688	773	852	918	1,038
Payroll tax	598	669	737	818	922
Miscellaneous	336	381	410	329	347
Buildings;					
Schools (a)	1,978	2,379	2,197	2,409	2,434
Agricultural College	52	52	21	12	15
Sinking fund payment	878	1,026	1,167	1,328	1,489
Interest on loan expenditure	2,968	3,404	3,930	4,515	5,047
Total expenditure from Consolidated Revenue ..	43,989	49,856	56,264	63,316	66,931
Receipts:					
Education Department	783	820	963	975	1,096
Agricultural College	89	105	103	101	99
Miscellaneous	9	18	37	56	65
Commonwealth grants (b) ...	3,139	3,651	5,080	6,240	4,418
Total receipts	4,020	4,594	6,184	7,371	5,679
Net expenditure from Consolidated Revenue ..	39,969	45,260	50,080	55,945	61,253
Loan Expenditure:					
Buildings;					
Schools, etc.	11,940	9,867	11,270	11,781	10,764
Agricultural College	16	77	45	74	13
Universities and Advanced Education	—	—	—	—	3,800
School buses	263	268	279	281	283
Student hostel advances (including buildings)	160	346	254	222	31
Total	12,379	10,558	11,847	12,358	14,891
Less repayments and redemptions	955	1,081	1,296	1,418	3,514
Net debit to loan accounts ..	11,424	9,477	10,551	10,940	11,376

(a) Includes technical high schools and Institute of Technology.

(b) To and including 1965-66, for University purposes only. Thereafter includes grants for Colleges of Advanced Education (\$275,000 in 1966-67).

6.3 SCIENTIFIC AND RESEARCH ORGANISATIONS

THE WEAPONS RESEARCH ESTABLISHMENT

The Weapons Research Establishment, situated at Salisbury, is the largest of three organisations within the Research and Development Branch of the Department of Supply. The Research and Development Branch, with its headquarters in Canberra, is responsible for research and scientific development in relation to defence, including the operation of the Joint United Kingdom-Australia Weapons Research Project. The Weapons Research Establishment is concerned with research, development and testing of guided missiles, tracking of satellites and space vehicles, and, through Australia's membership of the European Launcher Development Organisation, with the development of a launching vehicle for placing satellites in orbit for peaceful purposes.

The headquarters of the Weapons Research Establishment occupies an area of four and a half square miles at Salisbury. Facilities within the area have been provided for branches of British firms which have contracted with the British Ministry of Technology to develop weapons systems or components.

The Establishment has four main sections: namely, the Trials Wing, the Space Physics Wing, the Weapons Research and Development Wing and the Engineering Wing. The Trials Wing is concerned with the operation, development and instrumentation of the Woomera Range and the planning, execution and assessment of trials. The Space Physics Wing undertakes the operation of United States satellite and space tracking stations throughout Australia, and conducts research and development in support of the range—including investigations into the characteristics of the upper atmosphere, using sounding rockets. The Weapons Research and Development Wing is concerned with Australian-initiated defence research and weapon development, but assistance is also given with some phases of the Joint Project programme. The Engineering Wing provides the design and workshops effort required to support the work of the Establishment and the Range.

Testing ranges have been established at Woomera, which is approximately 280 miles north-west of Adelaide. A township, together with modern amenities such as hospital, school, kindergarten, community store, swimming pool and all sporting facilities, has been built at Woomera to accommodate the range and allied service personnel and their families. The population of Woomera including Maralinga is approximately 4,700. The total strength of Weapons Research Establishment is about 5,400 people, including staff at Salisbury and Woomera and attached service personnel.

Edinburgh Airfield from which the RAAF carries out experimental and other flying required for the Establishment's projects was transferred from the control of the Department of Supply to the Department of Air on 1 February 1968.

Early in 1968 a \$1.3 million *Ikara* training facility was installed at Salisbury. The *Ikara* is the Australian designed guided missile anti-submarine system.

European Launcher Development Organisation (ELDO)

By virtue of the major facilities at Woomera for launching space vehicles, Australia has become a member of ELDO, which has been established with the object of developing a launching vehicle for placing satellites in orbit for peaceful purposes. Other members of ELDO are Britain, Belgium, the Federal Republic of Germany, France, Italy and the Netherlands.

United States Space Projects

Agreements exist between the Australian and United States Governments for a co-operative programme for the establishment and operation in Australia, for

scientific purposes, of facilities for space vehicle tracking and data recording. Space tracking, telemetry and command stations have been established at Island Lagoon (near Woomera); Carnarvon (W.A.); Cooby Pedy (Qld) and at Honeysuckle Creek, Orroral Valley and Tidbinbilla (near Canberra).

All these are an integral part of the world-wide network of tracking and data recording stations established by the United States National Aeronautics and Space Administration to support its programme for manned space vehicles, scientific satellites and deep space probes.

THE COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION

The Commonwealth Scientific and Industrial Research Organization (C.S.I.R.O.) is a corporate body established by Act of Parliament. Its first responsibility is to carry out 'scientific research and investigations in connection with, or for the promotion of primary or secondary industries in the Commonwealth . . .'. The governing body is an executive of five full-time and four part-time members.

The executive is supported by a national advisory council and by a State committee in each State. These advisory bodies are composed of scientists, agriculturalists and industrialists. Council and committee members are frequently consulted, either individually or corporately, by the executive. They also take the initiative in bringing problems to the attention of the executive.

Four of the thirty-four C.S.I.R.O. research divisions have their headquarters in South Australia: these are the Divisions of Nutritional Biochemistry; Soils; Horticultural Research; and Mathematical Statistics.

The Division of Nutritional Biochemistry's interests extend through the fields of nutritional biochemistry and nutritional physiology. The greater part of its efforts have been concentrated on research associated with sheep nutrition and wool and meat production. The Division's work on the role of trace elements in plant and animal nutrition has been of far-reaching consequence. The animal nutrition work has led to practical means of controlling 'coast disease' and 'phalaris staggers', two common diseases of sheep. Plant nutrition research has shown how added traces of elements such as copper and zinc enable large tracts of country, previously regarded as desert, to be farmed profitably.

The Division has its headquarters laboratory in the grounds of the University of Adelaide and a field station at O'Halloran Hill.

The Division of Soils has a headquarters laboratory adjacent to the Waite Institute, in the suburbs of Adelaide. Here the efforts of the Division's soil surveyors are consolidated into detailed maps showing the distribution of soil types in Australia. A good deal of chemical research has been concerned with phosphorus, since Australian soils are almost universally short of this element. Nitrogen-fixing micro-organisms in the soil are singled out for special study by the Division's microbiology group. Soil-water relationships dominate the attention of the Division's physicists; the swelling and shrinking of soils under the influence of water is important, since it can have practical effects on the stability of foundations and the water holding capacity of dams.

The Division of Horticultural Research, formerly known as the Horticultural Research Section has its headquarters in Adelaide and a laboratory located at Merbein in Victoria.

The majority of the work of this Division is directed towards vines but attention is also given to important tree crops such as citrus, peach and apple.

Research is currently proceeding on five main topics: vine improvements; vine physiology; grape biochemistry; fruit tree research; and nematology. Experimental work is divided between the Adelaide laboratory which mainly conducts glasshouse and laboratory investigations, and the Merbein laboratory which is the base for field investigations.

The Division of Mathematical Statistics has its headquarters in Adelaide, but its officers are stationed throughout Australia. Many of its officers are located in various other C.S.I.R.O. laboratories, where they contribute through their statistical knowledge to many different research programmes. The Division has developed a number of fundamental research interests of its own, particularly in theoretical and meteorological statistics.

THE INSTITUTE OF MEDICAL AND VETERINARY SCIENCE

The Institute of Medical and Veterinary Science was established by Act of Parliament in 1937 to incorporate the functions of the former Adelaide Hospital Laboratory. Its present main buildings were occupied in May 1939. The war years and those which immediately followed were so abnormal and conditions so difficult that any development which would normally have occurred was delayed severely. The period of relatively great expansion of its services and activities commenced in 1950 and is still continuing today. The increase in work is reflected in the increased number of tests performed by the Institute over the years since its inception. In 1966-67 there were 721,993 tests carried out compared with 175,528 in 1952-53 and approximately 27,000 in 1938-39.

The Institute is administered by a council responsible to the Minister of Health. The Director of the Institute is the chief executive officer of the council.

The Institute of Medical and Veterinary Science

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
Staff at end of year :					
Graduate	58	57	60	60	66
Other	164	182	187	203	213
Tests performed	447,587	477,555	551,195	618,853	721,993
Revenue :	\$	\$	\$	\$	\$
State Government grant	504,000	574,000	674,000	707,000	836,217
Fees for laboratory tests	191,264	184,216	229,136	259,949	299,909
Other	36,148	32,894	43,760	46,589	52,897
Total	731,412	791,110	946,896	1,013,538	1,189,023
Expenditure :					
Salaries and wages	490,458	581,876	658,634	726,627	821,533
Other	178,892	239,494	215,332	242,001	294,847
Total	669,350	821,370	873,966	968,628	1,116,380

The Institute provides diagnostic facilities in all branches of clinical pathology for the Royal Adelaide Hospital and other metropolitan and country hospitals, for public health authorities, for industry, and for private practitioners. It also undertakes work in all branches of Veterinary Pathology for the Department of Agriculture, and for veterinary practitioners and stockowners. Research is conducted into selected problems connected with disease in man, and in animals of economic importance. The staff of the Institute takes part in the teaching of the medical sciences to graduates, students and technicians.

During 1968 a food hygiene laboratory which will help to maintain the standard of Australian food exports was established at the Institute. All types of food produced in South Australia and in some other parts of Australia will undergo bacteriological tests at the laboratory. Tests will also be made on food imported into Australia to see that it conforms with Public Health Department standards.

It is intended that the laboratory which was established through funds provided by the Australian Meat Board and the Australian Dairy Produce Board will maintain a close liaison with a similar laboratory located in London to ensure uniformity of standards and methods.

WAITE AGRICULTURAL RESEARCH INSTITUTE

The Waite Agricultural Research Institute was established, within the University of Adelaide, in 1924.

The research projects conducted at the Institute cover a wide range of topics, of which the following are a few examples: relationship of stocking rates to pasture composition and fertiliser practices; the protein chemistry of the wheat grain; the genetics and breeding of cereals and pasture plants; flower and fruit development in horticultural plants; studies on soil-borne and virus diseases of plants; the nutrition of the honey bee; and the biology and control of the *Sirex* wood-boring wasp.

Further details relating to the Waite Institute may be found on pages 162-163.

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

The Australian Mineral Development Laboratories, formerly the Research and Development Branch of the Mines Department, is a corporate body constituted under the Australian Mineral Development Laboratories Act, 1959.

Established in January 1960, for a period of five years to provide services for the investigation of problems relating to the development of mineral resources, mineral processing and utilisation of mineral products, the Laboratories are controlled by a council with representation from the Commonwealth and State Governments and from the Australian Mineral Industries Research Association Ltd. These authorities contribute the major proportion of funds for the Laboratories.

In 1963 the Act was amended to provide for the continued operation of the Laboratories on a permanent basis and also to confer a greater degree of autonomy upon the organisation. Early in 1964, agreement was reached with the contributing parties regarding the guarantee of funds which resulted in annual guarantees of \$240,000 from the State Government and \$120,000 each from the Commonwealth Government and the Australian Mineral Industries Research Association Ltd. Under this arrangement, each contributing party undertakes to supply the Laboratories with work to the value of the amount guaranteed.

6.4 CULTURE AND RECREATION

LIBRARIES

The State Library

The State Library of South Australia has its origin in a collection of books assembled in London in 1834, two years before the province of South Australia was founded. The modern character of the Library was established in 1940 when, after the Price Report of 1937, the Library was separated from the Museum and Art Gallery and became a State Government department administered by the Libraries Board of South Australia. At the present time the Library is organised in three divisions: Reference Services, Lending Services and Technical Services.

The Library has a representative basic collection of nineteenth and twentieth century materials in all subjects except medicine and law. It has considerable strength in a number of subjects including South Australian publications, librarianship, wine, Australian Aborigines, River Murray shipping, sailing ships, and nineteenth century illustrated works on natural history. In addition there is an extensive collection of tape recordings of Australian authors, folksongs and aboriginal music. The Library is an official depository for the publications of the United Nations, Unesco and some of the other specialised agencies, and the publications of the Australian, British, Californian, and Philippine governments.

The oldest section of the Library is the Reference Library which is the central basic collection. Since 1946 the books, excepting rare, irreplaceable volumes, have been available for loan. About 5,000 periodicals are taken annually, and the newspaper reading room files 304 foreign and local newspapers. In 1966-67, 49,852 periodicals were lent. Legislation since 1878 provides for the deposit in the Library of copies of all items published in South Australia.

The Research Service, established in 1942, received 2,908 enquiries in 1966-67, mainly from industry. It supplies lists of references and arranges for the borrowing of books and periodicals selected from those lists as well as books and photocopies from interstate and overseas libraries. The service has an extensive collection of trade catalogues. The service also arranges documentary film evenings throughout the year in the lecture room. *Pinpointer*, a monthly index of popular Australian periodicals and *Index to Australian Book Reviews* are published.

In 1919 the Archives Section was established for the collection of original South Australian historical material. In 1925 legislation was passed forbidding the destruction of government documents without reference to the Libraries Board. At the end of June 1967 there was over 9,000 feet of occupied shelf space in the Archives. During the year 1966-67, 61,329 items (maps, views, documents and printed sources) were produced for 4,474 enquiries. A journal *South Australiana*, is published twice a year.

The Reference Division also staffs twenty libraries in other government departments.

The Childrens Library was established in 1915 and is believed to be the oldest in Australia. The carefully selected books include about 6,000 rare and old books in a special study collection. School classes visit the Library, and talks are given to groups of parents and to various societies.

People living outside the Adelaide metropolitan area are served by the Country Lending Service which began lending books in 1938. This service has 13,829 active borrowers, of whom 7,676 are children. During 1966-67, 19,531 books

were despatched in boxes to schools. Books are also lent to associations, clubs and gaols. The service also acts as a central pool for books and a central clearing house for enquiries from local public libraries. About 18,000 requests from these libraries are received each year.

In 1946 the Adelaide Lending Service was opened to serve metropolitan readers. Books were lent to 35,784 borrowers in 1966-67. There are special collections of books in foreign languages. Three hundred and seventy-two sets of plays were lent to play-reading and acting groups.

Another active section is the Youth Lending Service established in 1957. This caters for the needs of young people between the ages of thirteen and eighteen years. The service was used by over 11,000 young people in 1966-67. The collection, besides general literature, includes much on hobbies and careers of special interest to adolescents.

The Technical Services Division besides the usual cataloguing and accessions sections includes a bindery which employs more than fifty persons and a large photographic section. Photographic and xerographic copying facilities are available to the public and much work is done for the library itself. In 1962 the Libraries Board began an extensive programme of publishing facsimile editions and other works of Australian interest. Over 120 works have now been published. Long playing records have also been issued. Other publications include several series of *Occasional Papers* in various subject fields, and an annual, *Miscellanea Musicologica*, published in association with the University of Adelaide.

State Library of South Australia

Year	Reference Library	Childrens Library	Country Lending Service (a)	Adelaide Lending Service	Youth Lending Service	Total
At 30 June	VOLUMES HELD					
1963.....	213,779	32,911	173,043	42,434	12,865	475,032
1964.....	220,558	34,178	220,660	44,528	14,254	534,178
1965.....	227,613	35,991	262,036	46,192	14,858	586,690
1966.....	235,715	36,069	301,385	46,877	15,523	635,569
1967.....	243,398	38,073	328,168	47,046	15,535	672,220
To 30 June	VOLUMES LENT					
1963.....	69,471	225,756	202,689	255,554	110,304	863,774
1964.....	73,454	236,355	208,893	258,487	118,294	895,483
1965.....	78,318	234,797	215,383	266,818	112,397	907,713
1966.....	79,214	208,229	211,842	270,613	102,158	872,056
1967.....	89,639	209,245	219,133	283,563	99,304	900,884

(a) Volumes held include volumes on loan to local public libraries. In 1967 such loans amounted to 195,684. These have not been included in volumes lent.

The erection of a new building (the original main building was erected in 1884) was completed early in 1967. The first stage is three floors of approximately 2,174,000 cubic feet costing about \$3,000,000. The new building was officially opened as the State Library of South Australia in May 1967.

Local Public Libraries

Local public libraries financed by municipal authorities are subsidised under the Libraries (Subsidies) Act, 1955-1958. With general oversight and planning by the Libraries Board, subsidies (in 1966-67 amounting to \$82,186) are paid on a dollar for dollar basis. Twenty-eight libraries, operated by twenty-two local government authorities, serving almost half of the population of the State had been established by June 1967. In 1966-67 local public libraries lent 1,808,768 books to 111,205 registered readers. All book stocks (195,684) are interchangeable with a central pool maintained by the Libraries Board.

The Adelaide Circulating Library

The Adelaide Circulating Library also traces its origin to the collection of books dispatched from London shortly after foundation of the State. In 1884 the collection which had grown from this nucleus was divided, the text and reference books going to the newly formed Public Library, and the remaining works constituting the Adelaide Circulating Library.

The Library, which receives a small government grant each year, is controlled by a committee elected by subscribers.

At 30 June 1967 the library contained over 77,000 volumes, and subscribers during the year 1966-67 numbered 2,880.

Institute Libraries

In 1884, when the Public Library was established, there were already in existence 108 institutes with a combined membership of 5,000.

Institute libraries are situated in the metropolitan area and in country areas throughout the State. These libraries are largely dependent on members' subscriptions but also receive a government subsidy. Many institutes receive considerable support from local councils.

The Institutes Association of South Australia Inc. acts as a co-ordinating authority and as a purchasing agency for the majority of institutes; these, however, retain complete autonomy, being governed by a committee elected by members.

The borrowing facilities of institute libraries are available only to subscribers, although at some libraries the general public has access to, and the use of, reading facilities. Many libraries cater for children.

The conduct of institutes is regulated by the Libraries and Institutes Act, 1939-1967.

Institute Libraries, South Australia

At 31 December

Particulars	1963	1964	1965	1966	1967
Number of institutes	206	204	203	200	199
Subscribers	23,453	23,651	23,038	22,563	22,658
Number of volumes	761,761	725,335	751,209	756,671	755,877
Volumes circulated during year ..	1,967,099	1,933,184	1,854,057	1,811,704	1,629,300

Other Libraries

Particulars relating to the Barr Smith Library (459,000 volumes) at the University of Adelaide and the Flinders University Library (104,000 volumes) are given on pages 162 and 165 respectively. Other libraries include those of

the Royal Society of South Australia (approximately 23,500 volumes), the South Australian Branch of the Royal Geographical Society of Australasia (approximately 16,000 volumes) and the Parliamentary Library (60,000 volumes).

MUSEUMS

The South Australian Museum

Founded as a subsidiary of the South Australian Institute in 1856, the South Australian Museum was subsequently administered under the joint Board of the Public Library, Museum and Art Gallery and became a separate government department under the provisions of the Museum Act, 1939. Since then it has continued to develop as the focal point of natural history activities in this State.

Like most public museums, it serves a three-fold purpose—preservation, research and public education.

Several of the collections of specimens and data are outstanding; the collection of Australian ethnological objects being of world renown.

A staff of twelve professional research workers is responsible for the care of the collections, and for undertaking research, both pure and applied, on specimens under their control. This work is published in the *Records of the South Australian Museum*, and in other scientific periodicals.

Public education work includes the presentation of the latest information on the natural history of our unique fauna and flora in public display galleries covering more than 37,000 sq ft. Educational booklets setting out useful information on a variety of subjects are published and sold to visitors at nominal cost.

Other Museums

A number of historic residences serve as museums. In 1961 the 'Old Government House' at Belair was refurnished with relics of the colonial era and opened for public inspection. At 'Whalers' Haven', Victor Harbor, a pioneer cottage has been restored and features many relics of early settlement with particular emphasis on the whaling industry. The home of the poet Adam Lindsay Gordon, 'Dingley Dell' at Port Macdonnell, is maintained as an historic house and Captain Charles Sturt's original home at Grange was recently opened to the public. Items of historical interest are exhibited in old buildings in many of the early established country towns.

Various items of maritime association including pictures, models and fittings from early ships are displayed at the Nautical Museum at Port Adelaide.

A number of special museums are maintained at the University of Adelaide for the use of the staff and students and a Museum of Economic Botany is associated with the Botanic Garden.

The National Trust of South Australia

The National Trust of South Australia was established by Act of Parliament in 1955. The Trust is administered by a council and is financed by gifts, legacies and subscriptions and controls twenty-seven branches in country areas.

The Trust encourages the preservation of buildings of architectural and historic interest; one of its most recent acquisitions being Beaumont House, Beaumont Common built by Bishop Short, the first Bishop of the Diocese of Adelaide. It also claims to preserve lands of beauty, such as 'Wilabalangaloo', Berri, and to protect and develop the native flora and fauna as at 'Waitparinga' Reserve, Eden Hills. The Trust is also interested in preserving areas of scientific

interest, the G. S. Sandison Reserve at Hallett Cove, with its glacial pavements, being such a property. At 30 June 1967 the Trust controlled twenty-five reserves totalling 2,137 acres.

In 1963 the paddle steamer *Marion* was purchased and refitted by the trust and now floats in the old graving dock at Mannum.

ART GALLERIES

The Art Gallery of South Australia

The National Gallery of South Australia (since January 1968 the Art Gallery of South Australia) was opened in 1881. The first portion of the present building was completed in 1900 and this was greatly extended in 1936 as a result of a generous gift of \$20,000 from Mr Alexander Melrose and a grant of \$32,000 from the Government. The gallery became a government department under the Art Gallery Board in 1940. In 1962 a three story air conditioned wing was added, which has greatly increased its capacity.

The collections contain a token representation of the art of all periods and include excellent examples of Australian and contemporary British art.

The gallery has benefited by many bequests, the Ragless, Elder, Morgan Thomas, Boxall, David Murray and Mortlock bequests together totalling over \$252,000. Money has also been bequeathed for the Melrose Prize for a portrait or figure composition awarded every fourth year, and the Maude Vizard-Wholohan Prize awarded annually, alternately for a landscape or a figure subject in oils; there are additional Maude Vizard-Wholohan prizes for a water-colour and a print, and a prize for sculpture is awarded from time to time.

Many visiting exhibitions are displayed in the gallery. Lectures and demonstrations are given and collections of pictures and reproductions are circulated in country districts. A quarterly *Bulletin* has been published since 1939. An entirely free reproduction lending service is used by over 300 schools and government departments.

Other Galleries

A number of small commercial galleries present exhibitions throughout the year. One such gallery at Hahndorf is of particular interest through its historic setting.

The Royal South Australian Society of Arts and certain retail stores maintain galleries in which a limited number of exhibitions are held each year.

Beginning with the Citizens' Art Group exhibition in 1954 and the Advertiser exhibition in 1955 there has been growing interest in open air exhibitions as a medium for displaying local art. The 1968 Advertiser exhibition contained 1,055 exhibits submitted by 953 artists.

MUSIC AND DRAMA

MUSIC

In orchestral performance in South Australia the South Australian Symphony Orchestra maintained by the Australian Broadcasting Commission (see below), plays a leading role. The University Music Society presents approximately ten subscription concerts each year including orchestral music, chamber music and various solo performances. In addition the Elder Conservatorium of Music arranges free Sunday afternoon concerts, lunch hour recitals by staff members and a number of student concerts including performances by senior and junior orchestras. Other performances include chamber music by local and overseas artists presented by Musica Viva.

The Elizabethan Theatre Trust Opera Company presents seasons of opera in South Australia and local groups active in this field include the Intimate Opera Group and the Gilbert and Sullivan Society. A number of societies and denominational groups make a regular contribution to choral music.

The Australian Broadcasting Commission

In the metropolitan area the South Australian Symphony Orchestra each year gives thirty orchestral subscription concerts, usually with an overseas conductor or soloist—often both—and twelve youth orchestral subscription concerts with overseas and resident conductors and soloists. The A.B.C. also presents a recital series of six concerts by overseas artists and a series of four choral concerts with the Symphony Orchestra and the Adelaide Philharmonic Choir. In addition there are six free orchestral concerts annually, and frequently the A.B.C. presents a series of summer concerts.

During 1967 there were twenty-three free concerts with the South Australian Symphony Orchestra for schoolchildren in the metropolitan area. Two country centres, Mount Gambier and Broken Hill, have their own A.B.C. subscription series of four concerts; one by the South Australian Symphony Orchestra and three by world class recital artists. In addition the Symphony Orchestra goes on tour into the country and during 1967 visited thirteen country centres. In all these centres, the orchestra gave at least one free concert for schoolchildren as well as a public concert.

Also during 1967 the Orchestra for the first time visited the Northern Territory and presented public concerts in Darwin and Alice Springs as well as three free concerts for schoolchildren in Darwin and one in Alice Springs.

The Elder Conservatorium of Music

The Elder Conservatorium of Music at the University of Adelaide provides a comprehensive course of training for students in degree and diploma courses, and also caters for external students by providing instruction in the various branches of music as single studies.

Particulars relating to the Elder Conservatorium at the University of Adelaide are given on page 163.

DRAMA

Adelaide has one commercially run theatre, Her Majesty's, and in addition there are four smaller very modern theatres.

There are over twenty amateur theatrical groups operating in South Australia. The Adelaide Repertory Theatre Inc., which, with approximately 2,000 members, claims the largest membership of any amateur theatrical group in the southern hemisphere, has its permanent home at the Arts Theatre.

Many country centres support amateur theatrical groups and numbers of these combine annually for the South East Drama Festival and the Yorke Peninsula Drama Festival.

The Australian Elizabethan Theatre Trust, as well as presenting its own productions in Adelaide and certain country centres, gives some financial and other support to non-professional productions.

The Arts Council of Australia (S.A. Division) arranges some country tours by theatre groups while the adult education centres of the South Australian Education Department provide accommodation and some teaching for several amateur theatrical groups in country towns.

THE ADELAIDE FESTIVAL OF ARTS

In nine years the Adelaide Festival, through five festivals, has received much acclaim, not only throughout Australia, but also overseas.

The idea of an Arts Festival was conceived late in 1958 by a group of Adelaide citizens, whose objective was a festival on international lines following generally the example of Edinburgh. Consequently, early in 1959 an administrative body was established which was supported by twelve volunteer committees. The reliance on voluntary effort and the pattern of committees have since remained an integral feature of the festival organisation.

Industrial firms and private individuals assisted financially by lodging guarantees while the Commonwealth and State Governments and the Adelaide City Council made substantial contributions.

Although not without disappointments and frustrations, the first festival, held in March 1960 and extending over fourteen days, was a reassuring success with total attendances exceeding 300,000. It covered almost every aspect of the arts, with seventy-four performances for adult audiences as well as an element of popular entertainment out of doors.

Subsequent festivals held biennially saw a consolidation of the initial experiment and a broadening of the concepts envisaged. These later festivals benefited from the longer planning periods available, the establishment of a small permanent secretariat and international promotion and publicity programmes. By March 1964, the festival concept had been stabilised. Programmes had been expanded and many ancillary activities had been stimulated. Attendances continued to rise with noticeable increases in the numbers from interstate and overseas.

The Fourth Festival, March 1966

For the first time the Festival was extended to sixteen days and attracted more people than ever before. More than three hundred separate performances within the official programme as well as a large number of other activities provided a vast selection from which the public could choose.

The fourth Festival was more successful financially than its predecessors due to increased revenue from larger attendances and also because of an increase in the number of guarantors.

The linking of National Flower Day with the Festival has proved to be highly rewarding in lending colour and gaiety to the festivities.

Writers' Week brought together, for seminars and public sessions, writers from all over Australia and New Zealand and gained distinction from the presence of the Russian poet Yevtushenko and the English writer, Angus Wilson.

The innovation of opening Elder Park to free nightly entertainment of high quality was very popular and proved to be a successful adjunct to the light entertainment field which included jazz groups and folk singers.

The Fifth Festival, March 1968

The Fifth Adelaide Festival of Arts (March 7-23) covered a wider field than any of its predecessors, attracted an estimated 500,000 people to its various attractions, including about 17,000 visitors, and not withstanding competing factors, gave a satisfactory financial return.

There were more than 400 separate performances of which 230 were on the official programme, the remainder being 'fringe activities'. In addition there were five exhibitions at the Art Gallery and also a large number were held at private galleries.

In keeping with the high standards of previous festivals many international artists of high repute attended together with a number of well-known international groups. There was also strong representation in all fields from local sources.

Innovations were a commissioned musical work and a commissioned play; the latter being one of the six drama features in the drama content. Writers Week, spread over eight days, was attended by writers from the United States, Russia, France, Germany, Japan and New Zealand, as well as all Australian States.

BROADCASTING

The supervision of radio and television broadcasting is a Commonwealth responsibility and is carried out by the Australian Broadcasting Control Board under the *Broadcasting and Television Act* 1942-1967. An office of the Board is maintained in South Australia to administer the Act and in particular to supervise the programme content and the technical quality of transmission.

Radio and television stations fall into two categories; national and commercial. National stations are operated by the Australian Broadcasting Commission. These stations do not broadcast advertising material, the Commission being supported by an annual grant from Commonwealth revenue. Commercial stations are operated by companies licensed by the Postmaster-General and derive their revenue from advertising.

All radio and television receivers must be covered by licences issued by the Postmaster-General. Normal annual charges at 1 June 1968 were \$5.50 for a listener's licence, \$12.00 for a viewer's licence or \$17.00 for a combined licence, although reduced rates apply to pensioners who satisfy certain conditions and to persons living in remote areas, while licences are granted free of charge to blind persons and to schools. One licence covers all receivers owned by a licensee or his family and normally held at the licensee's address. Special licences are required for radio and television receivers on hire, the responsibility for the licence being borne by the hirer, and not the user, of the receiver.

Radio

The first stations to broadcast in this State were 5DN and 5CL. Station 5DN was issued an experimental licence in June 1924 and began operating under a commercial licence in February 1925. In November 1924, 5CL was licensed as an 'A class station', the forerunner of the national station. The technical management of 5CL was taken over by the Postmaster-General's Department in 1929 and the programmes by the Australian Broadcasting Commission in 1932.

Stations 5KA and 5AD followed in 1927 and 1930 respectively, and a second national station, 5AN, was established in 1937. The first country station was opened in 1931.

There are at present five metropolitan and eleven country stations operating. The country or regional stations relay programmes from metropolitan stations and in addition provide programmes of local interest.

The call signs and locations of stations are given in the following table, all call signs in South Australia being prefixed by the number '5'.

Radio Stations, South Australia

At 31 December 1967

National Stations		Commercial Stations	
Call Sign	Location	Call Sign	Location
5AN	Adelaide	5AD	Adelaide
5CL	Adelaide	5DN	Adelaide
5CK	Port Pirie	5KA	Adelaide
5LN	Port Lincoln	5AU	Port Augusta
5MG	Mount Gambier	5MU	Murray Bridge
5MV	Renmark	5PI	Crystal Brook
5PA	Penola	5RM	Renmark
5WM	Woomera	5SE	Mount Gambier

Adelaide's three commercial stations broadcast continuously, while all other stations operated between 121 and 127 hours per week as at June 1967.

Since 1963, the Australian Broadcasting Control Board has made surveys of all metropolitan programmes twice yearly to obtain information as to the general availability of programmes in each city. The programme analysis covers the period of transmission between 7.00 a.m. and 10.30 p.m.

Results of the surveys indicate that commercial stations broadcast mainly light entertainment in contrast to the national stations which, being independent of advertising revenue, provide a much wider variety of programmes.

The distribution of types of programme matter is set out in the following table. Details for South Australia are not separately available but closely approximate those for the Australian distribution. The very low figure for commercial childrens programmes is due in part to the competition from television.

Broadcasting Programmes by Categories, Australia 1966-67

All Metropolitan Stations

Category	Commercial	National	All Stations
	Per Cent		
Entertainment:			
Drama	0.8	4.9	2.1
Light and Popular Music	48.3	18.8	38.7
Variety, Talent, etc.	2.1	1.2	1.8
Incidental Matter	8.6	4.3	7.2
Serious Music and The Arts	0.3	27.0	9.0
News	9.8	10.0	9.9
Sport	5.3	3.3	4.7
Information and General:			
Family	2.2	0.8	1.7
Children	0.2	3.3	1.2
Information	2.0	7.7	3.8
Social and Political	2.0	14.0	6.0
Religious	3.3	2.3	3.0
Educational	(a)	2.4	0.8
Advertising	15.1	—	10.1
Total	100.0	100.0	100.0

(a) Less than 0.05 per cent.

From 1 April 1965, licensees who hold both broadcast and television receiving licences have been required to take out a combined licence as their television licence fell due. Details of broadcast listeners' licences at present in force are given below.

Broadcast Listeners' Licences, South Australia^(a)

Current at 30 June

Type of Licence	1963	1964	1965	1966	1967
Ordinary	223,512	230,668	231,909	242,412	238,872
Hirers' and short-term hirers' ...	727	910	1,138	1,090	966
Pensioner	31,191	32,985	34,303	36,422	36,424
Other	1,311	1,464	1,690	1,823	1,807
Total	256,741	266,027	269,040	281,747	278,069

(a) Includes Northern Territory (3,956 licences at 30 June 1967).

Television

The State's first television station, NWS Channel 9, a commercial station, began operating on 5 September 1959. It was followed by ADS Channel 7 in October of the same year, and the Australian Broadcasting Commission began operating ABS Channel 2 in March 1960. Of the four remaining stations three became operative in 1965, two of these being country stations relaying programmes from ABS Channel 2, the fourth station, located at Mount Gambier, became operative during 1966.

The call signs, channels and location of television stations are given in the following table.

Television Stations, South Australia

At 31 December 1967

National Stations		Commercial Stations	
Call Sign and Channel	Location	Call Sign and Channel	Location
ABS—2	Adelaide	ADS—7	Adelaide
ABGS—1	Mount Gambier	NWS—9	Adelaide
ABNS—1	Port Pirie	SAS—10	Adelaide
		SES—8	Mount Gambier

On 1 March 1968 a fifth commercial station, GTS4 commenced transmission at Port Pirie.

As the early stations became established their broadcasting time was increased until in December 1963 the two commercial stations were broadcasting in excess of seventy-seven hours per week and the national station sixty-seven hours. Early in 1964 there was a substantial reduction in hours of service but by June 1967 four stations were each operating for approximately ninety-four hours.

On commercial channels there is a considerable emphasis on drama and light entertainment, whereas the Australian Broadcasting Commission devotes more time to programmes of an informative and educational nature. The Australian Broadcasting Control Board's analysis of television programmes is derived from data obtained directly from commercial and national stations and is calculated on the actual duration of the programmes and not, as formerly, on

the scheduled duration as shown in programme journals. As few programmes ever occupy their scheduled duration a new category 'Other Matter' has been introduced to cover such items as programme promotions and 'filler' material. The time occupied by advertising is not dissected in the analysis but a separate study of advertising time based on data supplied in audience measurement survey reports carried out in Melbourne provides some indication of the proportion of time occupied by advertisements; in 1966-67 the estimated time was 13.4 per cent.

Results of surveys conducted by the Broadcasting Control Board in 1966-67 indicating the proportions of total broadcasting time (other than advertising) for various types of programmes are given in the following table. Details for South Australia are not separately available but closely approximate those for Australia.

Television Programmes by Categories, Australia 1966-67

All Metropolitan Stations

Category	Commercial	National	All Stations
	Per Cent		
Drama:			
Adventure	10.8	9.1	10.3
Domestic and Comedy	12.4	15.9	13.3
Other	27.3	13.0	23.7
Light Entertainment:			
Cartoons	5.5	3.5	5.0
Variety	3.8	5.6	4.3
Personalities and Oddities	6.4	1.7	5.2
Other	8.2	2.2	6.6
News	3.6	6.6	4.4
Sports	5.8	8.9	6.6
Information and General:			
Family	1.6	1.4	1.6
Children	3.6	3.0	3.4
Information	1.7	4.8	2.5
Social and Political	1.6	6.3	2.8
Religious	1.2	2.2	1.5
Education	2.5	13.3	5.3
The Arts	0.2	1.6	0.5
Other Matter	3.8	0.9	3.0
Total	100.0	100.0	100.0

Details of television viewers licences for the five years ending June 1967 are given below. At 30 June 1959, before regular transmission began, 6,124 licences were operative in the State.

Television Viewers Licences, South Australia

Current at 30 June

Type of Licence	1963	1964	1965	1966	1967
Ordinary	136,410	155,401	167,876	183,007	195,158
Hirers' and short-term hirers' ...	17,696	22,157	21,001	27,349	32,199
Pensioner	13,082	16,453	19,122	22,568	24,980
Other	314	419	643	802	2,167
Total	167,502	194,430	208,642	233,726	254,504

THE PRESS

The State's first newspaper, *The South Australian Gazette & Colonial Register*, was first printed in London in 1836, six months before colonisation. The second issue of this paper, which served both as the official government publication and as an unofficial reporter of the news, was produced in Adelaide twelve months later. *The South Australian Government Gazette* emerged as a separate organ in 1839 and the newspaper continued as *The Register*. In 1850 *The Register* became the first continuous daily paper.

In the next twenty years several more daily newspapers were introduced, and for many years there were two morning and two evening papers daily. However, in the last forty years the present system of three major newspapers—one morning daily, one evening daily and one weekend publication—has emerged.

The Advertiser, published each morning except Sunday, was first issued in 1858 as *The South Australian Advertiser*. It absorbed *The Register* in 1931. It is now distributed throughout the State, with about one third of its circulation in country districts.

The News, published each evening except Sunday, was introduced in 1923. It replaced two evening newspapers, *The Express & Telegraph* and *The Journal* which traced back their origins to the 1860s. Almost 80 per cent of sales of *The News* are in Adelaide and suburbs.

The Sunday Mail, printed on Saturday evenings and distributed mainly on Sunday mornings, first appeared under this name in 1955 following a merger between *The Mail*, first printed in 1912 and the *Sunday Advertiser*, which was introduced in 1953. About 35 per cent of sales of the *Sunday Mail* are in country districts.

In addition *The Chronicle* and the *Stock Journal* are published weekly. *The Chronicle*, established as a country newspaper in 1858, has the largest circulation (nearly 24,000) of any weekly agricultural newspaper in South Australia. The *Stock Journal*, previously the *Adelaide Stock and Station Journal*, established in 1904 and initially directed towards country distribution, now has a circulation of approximately 20,000 mostly by direct annual subscription, a significant proportion of which is metropolitan circulation with agricultural interests.

To support these major State-wide newspapers, a strong provincial press has been built up. There are at present thirty-seven country newspapers operating in the State with a combined circulation of over 103,000. Most of these are published weekly, although three appear bi-weekly and two tri-weekly. Of those still existing, *The Border Watch* (Mount Gambier) in 1861 and *The Bunyip* (Gawler) in 1863 were the first to appear. Earlier publications are, however, recorded; *The Port Lincoln Herald* for example was being printed in the early 1840s.

There are also district papers containing items of local interest circulated in a number of suburbs of Adelaide.

PARKS AND GARDENS

The Adelaide Botanic Garden

The Adelaide Botanic Garden is situated in parklands east of the Royal Adelaide Hospital with the main entrance off North Terrace.

The Garden, occupying about 45 acres, was established in 1855 and some of the original plantings are still flourishing. An area of about 75 acres north of the Garden was acquired in 1874 and this area, known as Botanic Park, has been developed as an Arboretum.

Since 1860 powers of management have been vested in a Board of Governors of eight members who serve for a period of four years but who may be re-elected for further terms.

The Garden contains an extensive collection of about 5,000 species of plants mainly of tropical and subtropical origin. Important features are the collections of native plants for dryland regions, cacti and succulents, the glass ground, glass house displays and the Wisteria arbor. The Museum of Economic Botany, opened in 1879, houses a comprehensive carpological collection and displays of plant products.

In 1954 the State Herbarium was re-established within the Botanic Garden Department and a new herbarium building was completed and occupied in 1965. At present it contains about 250,000 specimens.

State-wide advisory services are available on all matters relating to ornamental horticulture. Experimental tree plantations have been established at Giles Corner, Kulpara, Lameroo, Stansbury and Meningie.

Mount Lofty Botanic Garden of approximately 180 acres was established in 1960 and is expected to be opened to the public in the early 1970s.

The Zoological Gardens

The Royal Zoological Society of South Australia was founded in 1878, and in 1883 approximately 19 acres of Botanic Park were granted to the society for the establishment of the Zoological Gardens. At the same time arrangements were made for the various exotic and Australian animals and birds previously housed in the Botanic Garden to be transferred to the Zoological Gardens.

During 1966-67 a total of 108 species and varieties of mammals were exhibited including a large collection of marsupials. Of particular interest is a colony of Yellow-footed Rock-Wallabies, the only such colony in any zoological garden in the world. The Zoological Gardens also contain a fine collection of Australian birds, a total of 219 species and varieties of Australian and exotic birds having been exhibited during 1966-67.

The many mammals, reptiles, and birds are displayed in cages and enclosures; the enclosures for some animals are moated yards freely open to public view.

The revenue necessary for maintaining and developing the gardens is obtained through an annual State Government grant and from gate receipts and sundry sources.

During 1966-67 about 373,000 persons visited the Zoological Gardens.

National Parks and National Parks Reserves

The National Parks Act, 1966, provides for the setting aside of certain lands as national parks and for the administration of such areas by a body of commissioners.

At 30 June 1967 land vested in the National Parks Commission covered 555,958 acres and consisted of 33 separate areas.

Two of these areas, Belair National Park and Para Wirra National Park are extensively developed with recreational facilities such as tennis courts and ovals, while a third, Cleland National Park, contains a large Native Fauna Reserve which is open to the public.

Limited development only has been permitted in all other parks to this time and they are retained where possible for the protection of native flora, fauna and areas of scenic value.

Late in 1967 an area of approximately 250 square miles, the Elliot Price Wilderness National Park, located in Lake Eyre was brought under the control of the National Parks Commission. Following the acquisition of this land 2,670 square miles of the Simpson Desert was proclaimed as the Simpson Desert National Park early in February 1968. This new national park is more than ten times larger than any other in this State.

National Pleasure Resorts

The South Australian Government has designated twenty-one areas throughout the State as national pleasure resorts to be administered by the Director of the Immigration, Publicity and Tourist Bureau. A number of these areas have been developed while others have been preserved in their natural state.

Some are of historical interest (such as Dingley Dell, near Port MacDonnell and the Old Toll House on the Glen Osmond Road). Others, for public recreation, include Loftia Park in the Mount Lofty Ranges. Four have caravan park facilities.

Others include features of scenic interest, such as Tantanoola Cave in the South East and Wilpena Pound in the Flinders Ranges. There are refreshment kiosk facilities at several, including Mount Lofty Summit, Morialta Falls Reserve and Waterfall Gully, all in the hills near Adelaide, and accommodation, including a modern motel unit has been provided for tourists at Wilpena Pound.

Municipal Parks and Gardens

The City of Adelaide is surrounded by 1,700 acres of parklands, considerable areas of which are devoted to sporting grounds and recreational facilities. In recent years intensive development of garden areas has been carried out and at 30 June 1967 there were 340 acres of gardens. Plantings during the year 1966-67 included 420 trees and 450 shrubs.

Most suburban and country local government authorities maintain parks and gardens within their domain.

SPORTING FACILITIES

In 1964 the National Fitness Council of South Australia conducted a survey of recreational facilities in the metropolitan area. Summarised results of this and earlier surveys are given in the following table.

Recreational Facilities^(a), Metropolitan Area^(b)

Facility	1954	1958	1964
		Acres	
Field sports (c).....	2,585	2,497	2,065
Children's playgrounds	95	87	79
Parks and gardens	677	767	630
Other (d)	1,718	1,866	2,981
Total	5,075	5,217	5,755

(a) School recreational facilities and regional reserves such as National Park and Waterfall Gully are excluded.

(b) As defined for Census purposes prior to June 1966.

(c) Includes tennis courts and bowling greens.

(d) Includes race courses, golf courses and areas reserved but undeveloped.

The total of 5,755 acres in 1964 represented approximately 9.5 acres per thousand persons.

Sports Grounds

Adelaide Oval, occupying approximately 15 acres of the north park lands, is leased to the South Australian Cricket Association and is the venue for major cricketing and Australian rules football events.

In addition there are a number of major suburban ovals where feature cricket and Australian rules football matches are played. Among the more important of these is Norwood Oval, which is also the main venue for outdoor night sports, especially baseball. Recently the Olympic Sports Field (previously Kensington Oval) has become the State Headquarters for athletics following the laying of a top-class bituminised rubber athletic track, and this arena is also frequently used for soccer matches.

The park lands of the City of Adelaide are used extensively for sporting purposes and during 1966-67 permits were issued for the use of 219 sports grounds (excluding tennis courts).

Sports grounds are distributed throughout suburban Adelaide, at approximately one to two mile intervals, and throughout country areas. In addition sports areas are available at most State and private schools.

Race Courses

There are three registered metropolitan courses: Victoria Park, occupying approximately fifty-eight acres of the east park lands, Cheltenham and Morphettville. In addition there were, at 30 June 1967, forty-two registered racing clubs and forty registered country courses. Picnic race meetings are held at a number of outlying centres.

Trotting Tracks

Trotting is conducted at the Royal Agricultural and Horticultural Society showgrounds at Wayville. At 30 June 1967 there were also tracks at Gawler and at thirteen other country centres. Wayville, Gawler and seven other country tracks have facilities for night trotting.

Golf Courses

At 30 June 1967 there were six suburban public courses including two 18-hole courses and a par-3 links utilising 248 acres of the north-west park lands, and a course at National Park, Belair.

There were also fourteen private courses operating within suburban Adelaide. During early 1968 a new par-3 links was constructed and opened at Semaphore South. In addition there are courses at many country centres.

Tennis Courts

The South Australian Lawn Tennis Association's courts at Memorial Drive, North Adelaide occupy approximately 6 acres of the north park lands. These courts were the venue for Davis Cup matches in 1952, 1956 and 1963. In 1966-67 the park lands also contained 146 tennis courts. Courts associated with schools, churches and private clubs exist throughout the State.

Bowling Greens

At 30 June 1967 there were 228 bowling clubs registered with the Royal South Australian Bowling Association—sixty-four in and near Adelaide, 156 in country areas, four at Broken Hill, N.S.W., and four in the Northern Territory. The size of clubs varied from thirty-five rinks at Bordertown to as few as six rinks, with the two largest suburban clubs being Holdfast (thirty-three rinks) and Lockleys (thirty-two rinks). In addition in the metropolitan area there are five all-women clubs registered with the South Australian Womens Bowling Association.

Swimming Facilities

At 31 December 1967 there were fifty-nine public swimming pools in South Australia, of which forty-nine were in country centres. Of these only eight country and two metropolitan pools had been in use prior to 1950, recent activity having been stimulated by a State Government subsidy on pool construction. Of the fifty-nine pools, fifty-two had treated water, the remainder were in lakes, dams, rivers or the sea, or utilised sea water. During February 1968 another metropolitan pool having treated water was opened.

Swimming pools are also provided at thirty-two State schools, sixteen of these being in country areas. In addition a further five pools in the planning stage will include the first 25-metre pool in a school and are expected to be completed for the 1968 season. Swimming facilities are also available at a number of private schools. The Education Department encourages school committees to build swimming pools by granting subsidies for their construction.

The City Baths Olympic Pool, opened in 1940, is the venue for major swimming events. In February 1967 the National Swimming Titles were held at this pool.

The nature of Adelaide's foreshore and that of many country beaches, combined with the prevailing climate, provides ideal conditions for open sea summer bathing.

LOTTERIES AND BETTING

Lotteries

On 20 November 1965 a referendum was held in South Australia to resolve the question 'Are you in favour of the promotion and conduct of lotteries by the Government of this State?'. Of the 92.5 per cent of enrolled electors who voted, 65.7 per cent voted in favour of the question, 27.1 per cent were not in favour and 7.2 per cent recorded informal votes.

Subsequently in August 1966 a Bill was introduced into the House of Assembly to give effect to the 'Yes' vote recorded at the referendum. The State Lottery Act, 1966 provides for the promotion and control of lotteries by the Government of the State. In November 1966 a Lotteries Commission, consisting of a chairman and two other members, was appointed to administer the Act which came into operation by proclamation issued on 8 December 1966. The first draw was made in May 1967.

In accordance with Section 16 of the Act all moneys received by the Commission are paid into a Lotteries Fund from which moneys are made available for meeting the expenses of the Commission and paying prizes. The balance of the Lotteries Fund which represents the surplus of income over expenditure and prize moneys not claimed for over six months is from time to time, as required by the Treasurer, transferred to a Hospitals Fund. Up to 31 May 1968 approximately \$1.75 million had been transferred to the Fund.

Originally, only one lottery, a 50 cent series was conducted but in July a Jackpot series was introduced.

The Commission operates an Account Service by accepting deposits from persons wishing to invest in each lottery without the need to purchase tickets themselves. At the present time, 554 subscribers avail themselves of this service.

Because of the high degree of mechanisation employed, the Commission is able to produce a result slip within four hours of a lottery being drawn.

At 1 March 1968 there were 261 Lotteries Commission Agents appointed in South Australia. Of these 153 were in the Adelaide and suburban area; sixty-three in country areas and forty-three were subscriber (non-ticket selling) agents.

Betting

Legalised betting in South Australia is restricted to horse racing, trotting and coursing events with betting on coursing events being confined to 'open' and 'enclosed' meetings for the coursing of live hares. Betting on 'speed' coursing—or dog racing—is not at present sanctioned.

Prior to December 1933 legalised betting was restricted to totalisator betting at registered race meetings; from 1933 until 1967 it was limited to 'on-course' totalisators and with bookmakers who were licensed to bet on courses where meetings were held, and from January 1934 to February 1942 with bookmakers who were also licensed to bet 'off-course' in specially registered premises in both metropolitan and country areas.

As a war-time measure, horse racing in South Australia was banned from March 1942 until October 1943, and 'off-course' betting facilities were not re-established until 1946 when they were restricted (by legislation) to country areas. At present Port Pirie is the only town where bookmakers now operate in registered premises.

However, in October 1966, an amendment to the Lottery and Gaming Act, 1936-1966 made provision for the setting up of a totalisator agency system of off-course betting in South Australia.

A board was appointed to administer the new system and Totalizator Agency Board (TAB) headquarters were established in Adelaide during December 1966.

In its first twelve months of operation the number of agencies in South Australia has grown from fourteen to seventy-five. Further premises in the city, suburbs and country towns are being established progressively towards the planned total of over 160 agencies within the State. In addition a system of telephone betting is available to persons who have established accounts with the TAB.

The TAB first operated on 29 March 1967 on a country race meeting whilst it operated for the first time on a metropolitan meeting on 1 April 1967.

To 30 June 1967 off-course investments totalled \$2,458,723, and \$88,000 was collected by the Commissioner of Stamps for duty on off-course totalisator betting and paid into the Hospitals Fund at the Treasury as required by the Lottery and Gaming Act.

6.5 HEALTH

HISTORICAL

The first Health Act in South Australia was passed in 1873. This Act, which was modelled on earlier English legislation, established a Central Board of Health, and a number of town councils were constituted as local boards. Regulations were mainly concerned with improved sanitation and the checking of 'epidemic, endemic and contagious diseases'. Amendments to this Act followed in 1876 and 1884, and a fourth Act, replacing earlier legislation, was passed in 1898. The present Health Act dates from 1935.

Administration was continued under the authority of the Central Board of Health until 1949 when the Department of Public Health was formed to co-ordinate the work of the board and other health activities.

The first hospital in South Australia was built in 1837. It was a small thatched hut situated on North Terrace near Holy Trinity Church and measured 18 feet by 12 feet. The foundation stone of the first Adelaide Hospital was laid in 1840. This building, which was eventually demolished in 1938, contained two 12-bed wards and four smaller rooms. The first buildings of the present Royal Adelaide Hospital were erected in 1856-57.

Hospitals in the country were established at Mount Gambier in 1869, Wallaroo and Port Lincoln in 1870, Port Augusta in 1875, and Port Pirie in 1890. The Port Adelaide Casualty Hospital was erected in 1882.

The State's first mental hospital, now demolished, was situated in Botanic Park. The Parkside Psychiatric Hospital (now Glenside Hospital) commenced operation in 1870 under the control of the Colonial Surgeon. The Enfield Receiving House and the Northfield Mental Hospital (now Hillcrest Hospital) were established in 1922 and 1929 respectively.

ADMINISTRATION

The administration of health in South Australia is principally under the control of three main authorities: The Department of Public Health, the Hospitals Department and the Commonwealth Health Department. Broadly their activities cover different fields as follows: The Department of Public Health concentrating on general health matters including the prevention of disease, the Hospitals Department on hospitalisation, and the Commonwealth Health Department on health on a national basis including national health services and quarantine.

The Department of Public Health embraces the activities of the Central Board of Health, the School Health Branch (including the Deafness Guidance Clinic), the Poliomyelitis Branch, the Food and Drugs Advisory Committee, the Radiological Advisory Committee, the Clean Air Committee, and also the public health aspects of the control of tuberculosis, including the chest clinic and the State X-ray health surveys.

The Central Board of Health administers the Health, Food and Drugs, Dangerous Drugs, Noxious Trades and Bakehouse Registration Acts. The board also has responsibilities under the Local Government Act and the Cremation Act.

The Health Act and the Food and Drugs Act constitute every municipal or district council a local board of health or local authority for its area, except that in the metropolitan area, the Metropolitan County Board (representing twenty metropolitan corporations) is the local authority under the Food and Drugs Act. The Central Board of Health acts as a supervisory body over all the 143 local boards under the Health Act, the Food and Drugs Act and the Bakehouse Registration Act. It has concurrent jurisdiction with local boards. Outside the boundaries of local boards the Central Board is the administering authority.

The Hospitals Department administers government hospitals and supervises the work of government subsidised hospitals in South Australia.

Other State authorities concerned with aspects of public health include the Engineering and Water Supply Department which is responsible for water supply and sewerage services, and the Metropolitan and Export Abattoirs Board responsible for the functioning of the metropolitan abattoirs and for the inspection of premises used for merchandising, storing or processing of meat.

Under the Health and Medical Services Act, 1949, an Advisory Council was constituted to investigate and report on matters referred to it by the Minister of Health. The matters may relate to any question concerning health, hospitals, medical services, the training and employment of any class of persons whose work relates to the promotion of health or to the treatment of disease or abnormality of the human body, and any proposals for new legislation relating to any of the matters referred to.

The work of the Commonwealth Department of Health includes the administration of the national health services, including medical, hospital, pharmaceutical and pensioner benefits. Under the *Quarantine Act* 1908-1966 the department is responsible for the various aspects of human, animal and plant quarantine.

Persons ordered into quarantine are accommodated at the Torrens Island Quarantine Station.

The South Australian Branch of the Repatriation Department administers the medical services provided for ex-service personnel whose disabilities are accepted as being due to war service.

GENERAL HOSPITAL SERVICES

The control of hospitals in South Australia is vested in several authorities including the Hospitals Department, the Repatriation Department, religious and charitable organisations, local community committees and private owners.

PUBLIC HOSPITALS

The Hospitals Department administers three general hospitals in the metropolitan area: Royal Adelaide Hospital, The Queen Elizabeth Hospital, and Morris Hospital (Tuberculosis). Work was begun in February 1968 on site preparation for the construction of a further general hospital in the north-eastern suburb of Modbury; 230 beds will be provided in the first stage which is expected to be completed in 1971. In the country there are government hospitals at Port Pirie, Mount Gambier, Port Lincoln, Port Augusta, Wallaroo and Barmera. In addition there are fifty other hospitals in country areas, conducted by local boards of management, which receive maintenance subsidies from the State Government and come under the general supervision of the Hospitals Department.

Public General Hospitals^(a), South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
Hospitals	65	65	65	67	65
Staff (at end of year):					
Medical;					
Honorary	635	626	657	684	671
Permanent	215	248	283	300	300
Nursing	3,194	3,387	3,490	3,727	3,996
Attendants and others	3,368	3,423	3,478	3,587	3,865
Patients:					
Admitted and re-admitted	91,342	96,471	101,918	107,984	114,179
Average daily number resident:					
Males	1,282	1,362	1,410	1,491	1,489
Females	1,619	1,643	1,705	1,804	1,874
	\$'000				
Revenue:					
State Government aid	10,007	12,094	14,171	19,681	22,138
Commonwealth (b)	1,833	2,098	2,083	2,097	2,933
Fees	4,941	4,908	5,592	6,205	7,159
Other	2,526	2,066	2,238	2,403	2,302
Total	19,307	21,166	24,084	30,386	34,532
Expenditure:					
Salaries	10,050	11,001	12,763	13,807	15,573
Maintenance, etc.	5,055	5,424	6,040	7,250	8,143
Buildings;					
New	3,183	4,646	4,871	9,617	9,131
Repairs	916	1,061	1,103	1,142	1,291
Total	19,204	22,132	24,777	31,816	34,138

(a) Public hospitals comprise those operated and maintained by State Government or semi-government authorities and those which receive a conditional subsidy or a regular grant from the State Government for maintenance purposes, but exclude those which receive *only* Commonwealth hospital benefits.

(b) Hospital, pharmaceutical and tuberculosis benefits.

Public General Hospitals ^(a), South Australia, 1966-67

Particulars	Royal Adelaide Hospital	Queen Elizabeth Hospital	Adelaide Childrens Hospital	Other General Hospitals	Total
Staff (at end of year):					
Medical;					
Honorary	259	112	102	198	671
Permanent	140	90	49	21	300
Nursing	1,383	630	454	1,529	3,996
Attendants and others	1,277	679	613	1,296	3,865
Patients :					
Admitted and re-admitted	24,568	15,992	13,159	60,460	114,179
Average daily number resident	1,075	428	277	1,583	3,363

(a) Public hospitals comprise those operated and maintained by State Government or semi-government authorities and those which receive a conditional subsidy or a regular grant from the State Government for maintenance purposes but exclude those which receive *only* Commonwealth hospital benefits.

Royal Adelaide Hospital

The Royal Adelaide Hospital, a general and casualty hospital for adults, is controlled by a board of three members, with the Director-General of Medical Services as chairman. The hospital, which incorporates a department of dentistry, is a university teaching hospital. Charges are made for in-patient treatment, and patients requiring out-patient treatment at the various clinics are subject to a means test as to eligibility.

In addition to the main hospital there are wards at Magill and Northfield. A section of the Northfield wards is used for infectious diseases cases.

At 30 June 1967 there were 1,283 beds at the hospital including 121 in the infectious diseases wards at Northfield. Extensive building additions and alterations are in hand.

The Queen Elizabeth Hospital

The Queen Elizabeth Hospital at Woodville is a general and casualty and maternity hospital controlled by a board of three members with the Director-General of Medical Services as chairman. It is a university teaching hospital, and is of recent origin, opening in 1954 with the completion of a temporary section. Permanent blocks followed in 1957 and 1959. Building extensions and additions to provide for an additional 264 beds were commenced in April 1968 and are expected to be completed in September 1970.

In 1960 the hospital took over the 'Mareeba' babies hospital as its paediatric department.

At 30 June 1967 there were 531 beds at The Queen Elizabeth Hospital.

Queen Victoria Maternity Hospital

The Queen Victoria Maternity Hospital was founded by public subscription, opening in 1902. It is a university teaching hospital.

Controlled by a committee of management the hospital is financially dependent on State Government aid. In 1966-67 State aid constituted 54 per cent and fees from patients 36 per cent of the revenue received for maintenance purposes.

Accommodation at 30 June 1967 was 111 beds.

Adelaide Childrens Hospital

The Adelaide Childrens Hospital was founded by public subscription in 1876 and the first patient admitted in 1879. It is controlled by a board of management and supported by State Government grants, public subscriptions and fees. In 1966-67 the hospital received 64 per cent of its revenue in the form of State Government Grants.

Children fourteen years and under may receive in-patient and out-patient treatment; however, eligibility for out-patient treatment is subject to a means test. The hospital provides a training school for nurses and instruction for medical students. The University of Adelaide Department of Child Health is situated at the hospital.

The history of the hospital has been marked by continued expansion, the most recent addition being a multi-storied out-patient building completed in March 1964. There were 413 beds at the hospital at 30 June 1967.

HOSPITALS FOR TUBERCULOSIS

The State Government conducts a chest clinic and a tuberculosis hospital in the metropolitan area. At the chest clinic patients are examined and treated, suspected cases are investigated and contacts are advised of precautionary measures and periodically re-examined. The Morris Hospital, Northfield, which at 30 June 1967 had fifty-six beds, cares for tuberculosis patients received from the chest clinic.

The Kalyra Sanatorium at Belair is conducted by the James Brown Memorial Trust Inc. for tuberculosis sufferers. At 30 June 1967 there were seventy-one beds at the Sanatorium.

REPATRIATION HOSPITALS

The Repatriation Department maintains two hospitals in South Australia—the Repatriation General Hospital at Daw Park (Springbank) and the Repatriation Hospital 'Birralee' at Belair. The Springbank hospital was a military hospital during the 1939-45 War, coming under the control of the Department in 1947.

Medical and surgical in-patient treatment is provided for eligible ex-service personnel, eligible dependants and serving members of the forces. The average daily number of patients in the Hospital during 1966-67 was 282 and the staff at the end of the year totalled 532. Facilities for the treatment of out-patients were completed in May 1968 replacing those formerly located at Keswick. The average occupancy of 'Birralee' during 1966-67 was thirty-five. Details of the number of patients treated at Daw Park and Belair are given on page 217.

PRIVATE HOSPITALS

Details of all private institutions approved for payment of Commonwealth hospital or nursing home benefits are given in the following table.

Private Hospitals and Nursing Homes, South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
Number of private hospitals and nursing homes	173	165	179	180	187
Number of beds at end of year ..	3,755	3,983	4,280	4,419	4,717

There are several large private hospitals in the metropolitan area including Calvary Hospital, the Memorial Hospital and St Andrew's Presbyterian Hospital, all of which are run by denominational bodies. Another large institution is the Home for Incurables at Fullarton which provides accommodation and nursing attention for persons suffering from chronic disease.

MENTAL HEALTH SERVICES

The Mental Health Services, a division of the Hospitals Department, is responsible for the management of public psychiatric services.

Glenside Hospital, situated on a site of approximately 130 acres, had accommodation for 1,206 patients at 30 June 1967.

Hillcrest Hospital, Northfield, had accommodation for 906 patients including two repatriation wards of fifty-eight beds. A special interest of this hospital is the accommodation of the alcoholic patient.

These two hospitals provide for admission and treatment on a 'short-term' basis, but in the main provide for the accommodation and treatment of 'long-term' patients, most of whom have been transferred from the receiving institutions.

The two receiving institutions, the Enfield Receiving House (88 beds) and the receiving section at Glenside (113 beds) are 'short-term' establishments where treatment is directed towards early discharge. Generally, duration of stay in a receiving house is a few months terminating in either transfer to one of the 'long-term' institutions or in discharge. In the following table, which covers the four institutions, particulars relate only to in-patients.

Psychiatric Hospitals, South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
Staff:					
Medical	24	28	32	30	27
Nursing and attendants	600	652	668	686	718
Patients:					
Admitted and re-admitted (a)					
Certified	903	901	782	642	671
Voluntary	1,701	2,231	2,279	2,168	2,195
Remaining end of year					
Certified	2,304	2,146	1,957	1,789	1,574
Voluntary	495	692	795	857	923
			\$'000		
Revenue:					
Commonwealth benefits	96	113	111	122	158
Fees, etc.	215	225	242	256	254
Net cost met by State Government	2,981	3,636	3,916	4,297	4,309
Total	3,292	3,974	4,269	4,675	4,721
Expenditure:					
Salaries	1,698	2,017	2,372	2,583	2,814
Maintenance, etc.	1,062	1,250	1,330	1,393	1,453
Buildings:					
New	280	349	165	321	102
Repairs	252	358	402	377	352
Total	3,292	3,974	4,269	4,675	4,721

(a) Direct admissions and re-admissions only. Excludes inter-institution transfers.

The fall over the period in admissions of certified patients and in the number of such patients remaining at the end of the year reflects the introduction of new, more effective treatment methods and advances in the understanding of mental health problems with a resultant shift in emphasis to treatment and out-patient clinics, the receiving house, a day hospital, child guidance clinics, a clinic for the intellectually retarded and a community mental health service. The number of patients who received treatment during 1966-67 at the non-residential public clinics and services was as follows: out-patient clinics, 2,863; day hospital, 228; child guidance clinics, 944; intellectually retarded clinic, 242; community mental health service, 104.

MATERNAL AND CHILD WELFARE

MATERNITY HOSPITALS

In addition to the Queen Elizabeth Hospital and the Queen Victoria Maternity Hospital, there were fourteen private hospitals in the suburbs and five government and sixty-nine subsidised and private hospitals in country areas which at the end of 1967 were licensed to operate as maternity hospitals.

MOTHERS AND BABIES HEALTH ASSOCIATION

The Mothers and Babies Health Association was established in 1909. This voluntary body, supported by government subsidy and public subscriptions, conducts maternal and infant welfare work throughout the State. At 279 regular centres Association sisters give advice on the management of babies and infants. One Baby Health train makes regular visits to country districts and mothers in sparsely settled areas are contacted by correspondence. The Association holds classes for expectant mothers and provides for educational lectures in schools.

Torrens House, the Association's mothercraft hospital, in addition to providing accommodation for mothers and infants, serves as a training school for infant welfare and mothercraft courses.

SCHOOL HEALTH SERVICES

Medical services were first introduced into schools in 1913. Since 1951 all school health services have been the responsibility of a branch of the Department of Public Health.

State schools within a radius of sixty miles from Adelaide and at five large country centres are visited annually and the children are medically examined while in Grades 1, 4 and 7 in the primary schools and in their second and fourth years in secondary schools. The remaining country schools are visited at approximately three-yearly intervals when all the children are examined.

During 1967, 40,312 children were examined by medical officers in 153 metropolitan and 129 country schools. Of these, 4,813 required treatment for defective vision, 2,689 for defective hearing and 9,988 for dental disorders. Where defects are found, the parents are notified and advised to obtain treatment.

Dentists using mobile vans examined 3,785 children in 1967 in country areas where a private dental service was not readily available. Children offered treatment in 1967 numbered 3,886, including some examined in the previous year; 3,547 accepted and were treated free of charge.

There were 2,914 children examined at the Deafness Guidance Clinic including 1,423 examined for the first time in 1967; 699 of those first examined in 1967 were referred to doctors or hospitals for treatment.

The staff of the School Health Branch at the beginning of 1968 included eleven medical officers, ten nurses, eleven dental officers, eight dental assistants, three otologists (two part-time) and three audiometrists.

COMMUNICABLE DISEASES

Under the Health Act, 1935-1966, certain diseases have been designated as 'infectious' and others as 'notifiable'. It is required that cases of infectious and notifiable diseases be reported to the local board of health, which in turn advises the Central Board of Health, and that cases of tuberculosis and venereal disease be notified directly to the Central Board.

Communicable Diseases: Cases Notified, South Australia

Disease	1963	1964	1965	1966	1967
Acute rheumatism	5	—	1	8	—
Diarrhoea, infantile	34	12	13	2	12
Diphtheria	—	—	1	—	—
Dysentery, bacillary	196	73	178	135	92
Encephalitis	10	3	6	9	20
Infective hepatitis	293	289	414	978	1,299
Malaria	—	—	3	1	1
Meningococcal infection	6	5	4	6	5
Paratyphoid	11	1	3	—	—
Poliomyelitis	7	—	—	—	—
Rubella	621	664	649	226	969
Salmonella infection	50	120	127	120	110
Scarlet fever	198	202	127	57	60
Tetanus	—	—	6	—	1
Trachoma	54	42	—	1	—
Tuberculosis	228	177	156	131	141
Typhoid fever	3	4	1	1	1
Other diseases	7	13	16	272	447

Venereal diseases became notifiable in South Australia from November 1965; prior to this the Director-General of Public Health was empowered to compel a venereal disease suspect to submit to medical examination and treatment. The Department of Public Health maintains a venereal diseases investigation clinic at the Royal Adelaide Hospital. There were 399 cases of gonorrhoea and 21 of syphilis notified during 1967; these are included in 'other diseases' in the preceding table.

Anti-Tuberculosis Campaign

Since March 1952 compulsory X-ray surveys of the population have been conducted in South Australia. With the advent of mobile survey units using miniature radiography it has been possible to X-ray all persons aged twenty-one years and over every three or four years. Where necessary persons are subsequently referred to their medical practitioner.

Children in Grade 1 at all State and certain private schools in the metropolitan area are given a tuberculin test. A further test is made at Grade 7 level and where appropriate the children are vaccinated.

Other references appear on pages 198 and 215.

Poliomyelitis Services

Following the development of Salk vaccine, a poliomyelitis immunisation programme was begun in 1956.

All injections were given by the Poliomyelitis Services until 1961 when the vaccine became available to other authorities. In 1964 the vaccine was released for use by private medical practitioners.

Up to the end of 1967, 692,003 first injections, 677,759 second injections, 608,363 third injections and 242,951 fourth injections had been given.

Oral (Sabin) vaccine was first introduced in July 1967 and will eventually almost completely replace the use of Salk vaccine. During 1967, 58,852 injections of Salk vaccine and 554,989 doses of Sabin vaccine were given.

The programme has corresponded with a dramatic decline in the incidence of poliomyelitis, as illustrated by the table.

Poliomyelitis, South Australia

Year	Cases Notified	Deaths
1950	973	17
1951	1,491	61
1952	709	12
1953	398	22
1954	176	5
1955	182	6
1956	122	3
1957	16	1
1958	10	1
1959	1	—
1960	12	—
1961	44	2
1962	19	2
1963	7	1
1964-67	—	—

There were no cases reported in the years 1964 to 1967.

OTHER HEALTH SERVICES

Blood Transfusion Service

The Red Cross Blood Transfusion Service collects and classifies blood for the daily needs of hospitals and to meet emergencies. During 1967 donors gave over 56,000 individual donations either at the Service's centre or at a mobile unit visiting metropolitan and country centres.

The Service maintains a blood bank at the Royal Adelaide Hospital, and a reference laboratory which, in addition to classifying donors' blood, performs investigations for hospitals and medical practitioners. There is a subsidiary blood bank at the Queen Elizabeth Hospital, and during 1967 blood transfusion centres were established at Mount Gambier and Whyalla.

The cost of maintaining the Blood Transfusion Service is met by the State Government (60 per cent), the Commonwealth Government (30 per cent) and the Red Cross Society (10 per cent).

Home Nursing

The Royal District and Bush Nursing Society of South Australia, through its thirty-three branches in metropolitan and country districts, provides nursing facilities to those in need of home nursing. The services of the fully trained nursing staff are provided free of charge to those unable to afford a fee, and to others according to their means. During 1966-67 a total of 149,627 visits were made by forty-five full-time nurses.

The Society also maintains a hospital at Marree and a medical centre at Iron Knob.

The Society obtains its revenue from State and Commonwealth aid (55 per cent of total revenue in 1966-67), fees from patients (20 per cent), and legacies, donations, local government aid and other sources (25 per cent).

Flying Doctor Services

People living in outback areas may receive medical attention through the Flying Doctor services. Aeroplanes with doctors and pilots are operated from control centres at Port Augusta and Alice Springs maintained by the Royal Flying Doctor Service of Australia (S.A. Section) Inc. In addition the Bush Church Aid Society maintains hospitals at Cook, Penong, Ceduna, Wudinna, Tarcoola, Coober Pedy and Rawlinna (W.A.), while the Flying Doctor Service conducts regular medical, dental and ophthalmic clinics at Andamooka, Marree and Oodnadatta.

Settlers with transceiver sets may consult the doctor by contacting the control centre, and the doctor may diagnose and prescribe over the air or may be flown to give direct medical treatment. The radio facilities of the flying doctor services are also used by the School of the Air, various community organisations and for the general relaying of messages.

Ambulance Services

The St John Council for South Australia Inc. has assumed responsibility for providing a full-time ambulance service for the metropolitan area. This service is manned and operated by the St John Ambulance Brigade which also assists in ambulance operation in certain country areas. In the metropolitan area during 1967 the Brigade's ambulances travelled a distance of 668,742 miles and carried 90,910 patients. Country ambulance services throughout the State are affiliated with the St John Council.

Voluntary Agencies

There are many other voluntary bodies operating in South Australia and doing health work of a special nature. Their activities cover such fields as care of the handicapped, hospital services, care of mother and baby, care of the aged and the provision of convalescent facilities.

CREMATORIUMS AND CEMETERIES

The first crematorium in South Australia, the Adelaide Crematorium, was erected by the Cremation Society of South Australia and presented to the State Government in 1903. It was closed in November 1959.

Cremations are currently conducted at the Centennial Park Crematorium which was erected in 1956 and is operated by the Centennial Park Cemetery Trust. There were 2,076 cremations in 1967.

Cemeteries in South Australia are divided into three main groups: those under the control of the State Government or local government authorities, those under church control and those under the control of trusts.

In each of the above groups the cemeteries are financed by the usual charges for burials and by the leasing of land for burial purposes. With church and trust cemeteries, the cost of maintenance is often derived from interest accruing from invested capital funds.

STATE GOVERNMENT EXPENDITURE ON PUBLIC HEALTH

The following table shows expenditure by the State Government from Consolidated Revenue Account on various aspects of public health. It includes both the cost of maintaining the various State agencies and the subsidies paid to voluntary organisations active in this field. Expenditure on sewerage, drainage and water supply is excluded. Figures for 1966-67 are not strictly comparable with those for earlier years because in 1966-67 some capital grants were charged to Loan

Fund whereas payments of an equivalent nature were made from Consolidated Revenue in preceding periods.

Net Expenditure on Public Health, South Australia^(a)

Category	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Care of sick and mentally afflicted:					
Government general hospitals .	8,329	9,273	10,572	11,918	13,157
Subsidies to:					
General hospitals (including					
Adelaide Childrens					
Hospital)	3,804	4,470	4,736	5,799	3,789
Other	242	294	322	321	316
Mental hospitals	2,957	3,588	4,114	4,401	4,719
Institutions for mentally deficient					
children	86	88	236	210	217
Health of mothers and children:					
Baby health centres	247	215	239	231	256
Maternity homes	280	248	823	1,632	516
Medical and dental examination					
of school children	182	222	240	263	270
Preservation of public health:					
(including Public Health Depart-					
ment and administration of					
Health Acts)	434	540	591	609	663
Total	16,562	18,938	21,875	25,384	23,904

(a) From Consolidated Revenue Account only.

MEDICAL PERSONNEL

The following table lists registrations with the Medical, Dental, Pharmaceutical, Physiotherapy, and Nurses Boards of South Australia, and with the Board of Optical Registration.

The figures for registered medical practitioners show the number of persons registered to practise medicine in South Australia and not the number actually practising, which is estimated at approximately two-thirds of those registered.

Professional Medical Personnel, South Australia

Number Registered at 31 December

Profession	1963	1964	1965	1966	1967
Medical practitioners (a)	1,883	2,002	2,080	2,175	2,282
Dentists	311	311	312	311	313
Pharmaceutical chemists	743	758	783	836	877
Opticians	90	93	89	91	91
Nurses (b)	6,879	7,255	7,699	8,065	8,467
Nurse aides	266	357	466	684	822
Midwives	3,016	3,136	3,272	3,353	3,482
Mental nurses	313	308	(c) 285	(c) 34	(c) —
Psychiatric nurses	—	—	(c) 76	(c) 419	515
Mental deficiency nurses	—	—	(c) 17	(c) 361	359
Infant welfare nurses (d)	428	454	484	503	525
Infectious diseases nurses	34	36	34	36	36
Physiotherapists	426	463	492	467	405

(a) Includes personnel not practising in South Australia.

(b) Nurses may also be registered and included as midwives, psychiatric nurses, mental deficiency nurses, etc.

(c) Affected by change in registration provisions.

(d) Includes mothercraft nurses.

Over the past twenty years there has been a considerable re-organisation of general practice in medicine with a movement away from single practices to partnership and group practice arrangements.

MEDICAL RESEARCH

The Institute of Medical and Veterinary Science

Details of this organisation are given under the heading of Scientific Organisations on pages 176-7.

The Anti-Cancer Foundation

The forerunner of the Foundation, the Anti-Cancer Campaign Committee, was formed within the University of Adelaide in 1928. The Committee's early activities were largely devoted to establishing and developing the Radiotherapy Department of the Royal Adelaide Hospital. As demand for these facilities grew the hospital assumed responsibility for routine treatment, and the Committee concentrated its activities on research. In 1962 the Committee was re-organised and became the Anti-Cancer Foundation of the University of Adelaide.

Early research was of a clinical nature, but more recently the Committee and the Foundation have subsidised research projects within the Institute of Medical and Veterinary Science and the various departments of the University.

The income of the Foundation is derived from gifts and bequests, government grants and subsidies, and from direct public appeals.

The National Heart Foundation

The National Heart Foundation of Australia, together with its South Australian Division, was established in February 1959. The National Heart campaign of 1961 raised \$5,124,000 for the work of the Foundation, of which \$662,000 was contributed in South Australia.

The campaign funds are being spent on research (70 per cent), education (15 per cent) and rehabilitation (15 per cent). Research funds, distributed at the national level, support projects in various departments at the University of Adelaide, and at the Institute of Medical and Veterinary Science, the Royal Adelaide Hospital and the Adelaide Childrens Hospital. Research funds are also used in providing local and overseas fellowships and travel grants.

To assist in its work in the fields of rehabilitation and public and professional education, the South Australian Division established the National Heart Foundation Centre in 1963.

6.6 SOCIAL WELFARE

The Commonwealth and State Governments and a large number of voluntary agencies minister to the social welfare of the population. The Commonwealth Government is concerned largely with the dispensing of fixed monetary pensions and benefits and with the provision of repatriation services. State agencies operate in the fields of child welfare and the care of Aborigines and distribute emergency relief in contingencies where Commonwealth assistance is not available or proves insufficient. The voluntary agencies, many of which receive Government aid, provide a wide range of services in various fields of social welfare.

COMMONWEALTH PENSIONS AND BENEFITS

EXPENDITURE

The following table sets out Commonwealth Government expenditure on social welfare. This includes social service payments, payments of national health benefits, grants under the Aged Persons Homes Act, and war and service pensions. It should be noted that the figures are for payments to recipients only, and do not include costs of administering the departments concerned.

Commonwealth Expenditure on Social Welfare, South Australia

Type of Benefit	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Social services :					
Aged and invalid pensions (a) .	33,951	36,120	38,509	39,691	43,720
Widows pensions	2,917	3,884	4,452	4,802	5,448
Child endowment	12,861	15,916	16,563	16,988	19,063
Maternity allowance	685	675	666	657	654
Unemployment benefits	1,185	751	390	709	1,653
Sickness benefits	525	508	475	512	554
Other	336	353	355	356	426
Total social service payments ...	52,460	58,210	61,408	63,715	71,518
National health benefits	16,066	17,080	18,948	21,254	23,100
Aged persons homes	878	1,348	1,726	2,389	3,274
War pensions (b)	12,380	13,535	13,240	14,667	13,642
Service pensions (b)	2,487	2,689	2,766	3,025	3,134
Total payments	84,271	92,862	98,088	105,050	114,668

(a) Includes allowances to wives of invalids and to wives of invalids on behalf of children.

(b) Includes Northern Territory. Includes pensions paid to dependants.

COMMONWEALTH SOCIAL SERVICES

Brief details of Commonwealth pensions and benefits are given in this section; however in discussing the eligibility of persons for the various payments all the necessary qualifications and exceptions to the general rule have not been delineated. Similarly such terms as 'income' and 'property' have not been defined. For more complete details reference should be made to the booklet *Commonwealth Social Services* issued by the Department of Social Services.

Historical

The first Commonwealth social service payments were made in 1909 when age pensions of \$1.00 per week, subject to a means test, were introduced. In the following year payments were extended to invalid pensioners.

Maternity allowances were introduced in 1912 and were subject to a means test from 1931 to 1943.

Child endowment was first paid in 1941; however, endowment for the first child and for student children dates from 1950 and 1964 respectively.

Rehabilitation services for invalid pensioners were introduced in 1941 and subsequently extended in 1948 to unemployment and sickness beneficiaries and in 1955 to tuberculosis patients, and young people of fourteen and fifteen years of age likely to become pensioners.

Widows pensions were introduced in 1942, funeral benefits in 1943 and unemployment and sickness benefits in 1944. Widow pensioners became eligible for rehabilitation services in 1958.

All Aborigines, except those who are primitive or nomadic, became eligible for age, invalid, and widows pensions in 1959.

Agreements for reciprocity in social service payments were first signed with New Zealand in 1943 and the United Kingdom in 1953.

Age and Invalid Pensions

Age pensions are payable to men aged sixty-five and over and women aged sixty and over, who have lived in Australia continuously for a period of ten years. If a person has completed five years but not ten years continuous residence, but has lived in Australia for periods which, in total exceed ten years, he may be eligible. Absences from Australia in certain circumstances and residence in New Zealand or the United Kingdom may be treated as residence in Australia.

Invalid pensions are payable to persons aged sixteen years and over who have lived in Australia continuously for five years and who are permanently incapacitated to an extent of at least 85 per cent, or are permanently blind. Where the incapacity or blindness occurred outside of Australia, other than during a temporary absence, ten years continuous residence is necessary. If a person subject to the ten year qualification has completed five years but not ten years continuous residence, but has lived in Australia for periods which, in total exceed ten years, he may be eligible. Absences from Australia in certain circumstances and residence in New Zealand or the United Kingdom may be treated as residence in Australia in qualifying for an invalid pension.

Age and Invalid Pensions, South Australia
Number of Pensioners

At 30 June	Age Pensioners			Invalid Pensioners		
	Males	Females	Total	Males	Females	Total
1963.....	16,799	39,430	56,229	4,315	3,612	7,927
1964.....	16,888	40,392	57,280	4,519	3,774	8,293
1965.....	17,018	41,290	58,308	4,603	3,887	8,490
1966.....	17,330	42,148	59,478	4,607	3,914	8,521
1967.....	18,074	43,361	61,435	4,960	4,126	9,086

At 31 December 1967 for both age and invalid pensions the maximum rate payable to an unmarried pensioner, or to a married pensioner whose spouse was not receiving an age or invalid pension, an unemployment, sickness or special benefit, a tuberculosis allowance or a service pension, was \$13 per week. The maximum rate for a married couple, both being pensioners, was \$11.75 per week each. The non-pensioner wife of an invalid pensioner, or of an age pensioner who is permanently incapacitated for work or permanently blind, may be granted a wife's allowance of up to \$6 per week. Where the pensioner is an invalid an allowance of \$1.50 per week is payable for each child under sixteen years or student child under twenty-one years. A supplementary allowance of up to \$2 per week may be paid to certain pensioners paying rent and who are entirely or substantially dependent on their pensions.

Payment of the preceding rates of pension is subject to a means test. Under the means test, provided the annual income plus one tenth of the value of property in excess of \$400 (for a single pensioner) or \$800 (for a pensioner couple) does not exceed \$520 for a single (unmarried, widowed or divorced) pensioner or \$884 for a pensioner couple, full pension is payable. If the combined income-property figure exceeds \$520 (or \$884) then the pension is accordingly reduced. There are certain items of income and property, including an owner-occupied dwelling, which are exempt from the means test. Blind persons are not subject to the means test except where receiving an allowance for a non-pensioner wife. The child's allowance for the first child of an invalid pensioner is also free of the means test.

Widows Pensions

Widows pensions are paid to widows and other women who satisfy certain conditions. There is a means test on income and property.

There are three classes of pensions:

Class A, a widow with one or more children under sixteen years of age or a student child under twenty-one years in her custody, care and control.

Class B, a widow of at least fifty years of age with no children under sixteen years, or student children under twenty-one years, or a widow of at least forty-five years of age who ceases to be eligible for a Class A pension because she no longer has a child in her custody, care and control.

Class C, a widow under fifty years of age who has no children under sixteen years of age but is in necessitous circumstances within twenty-six weeks of her husband's death. If a widow is pregnant, a pension may be continued until the birth of the child when she may qualify for a Class A pension.

For Classes A and B the term 'widow' includes a deserted wife who has been deserted at least six months, a divorcee, a woman whose husband has been in prison at least six months, and a woman, whose husband is in a mental hospital.

Widows Pensions, South Australia

Number of Pensioners

At 30 June

Class	1963	1964	1965	1966	1967
A	2,325	2,632	2,868	3,042	3,235
B	3,060	3,208	3,363	3,517	3,747
C	7	2	10	8	9
Total	5,392	5,842	6,241	6,567	6,991

The normal residential qualification is five years continuous residence immediately prior to claiming a pension; however, this period is reduced to one year if a woman and her husband were living permanently in Australia when he died. Continuity of residence is not considered as broken by certain absences. Residence

in New Zealand or the United Kingdom counts as residence in Australia. The means test operates similarly to that for age pensions except that for a Class A widow the property component is relaxed somewhat.

At 31 December 1967 the maximum weekly rates were: for Class A widows, \$17 (including \$4 mothers allowance) plus \$1.50 for each child; for Class B and C widows, \$11.75. Supplementary assistance of up to \$2 per week may be paid to widows who pay rent and are entirely or substantially dependent on their pension.

Child Endowment

Persons resident in Australia who have the custody, care and control of one or more children under the age of sixteen are eligible for child endowment. Approved institutions of which children are inmates are similarly eligible. Endowment is also paid for full-time students between the ages of sixteen and twenty-one years. There is no means test on child endowment, but one year's residence in Australia may be required if the mother and child were not born here.

From 19 September 1967 endowment was paid at the rate of 50 cents per week for the first eligible child under sixteen years; \$1 for the second; \$1.50 for the third; and for each subsequent eligible child the rate was increased by 25 cents per week over that payable for the next elder child *i.e.* \$1.75 for the fourth; \$2 for the fifth etc. Endowment of \$1.50 is paid for each child in an institution, and for full-time students between the ages of sixteen and twenty-one years.

Child Endowment, South Australia

At 30 June	Families			Institutions			Total Endowed Children
	Endowed Families (a)	Endowed Children		Approved Institu- tions	Endowed Children		
		Under 16	Students 16-20 (b)		Under 16	Students 16-20 (b)	
1963.....	146,377	329,198	—	55	1,644	—	330,842
1964.....	149,449	335,838	13,121	57	1,738	—	350,697
1965.....	153,461	344,019	14,133	54	1,721	89	359,962
1966.....	157,204	350,927	15,276	55	1,677	94	367,974
1967.....	158,645	351,664	17,230	56	1,661	143	370,698

(a) Excludes those with only endowed student children.

(b) Student endowment commenced 14 January 1964.

Maternity Allowances

Any woman, permanently resident in Australia, who gives birth to a child in Australia, is entitled to a maternity allowance. The amount payable depends on the number of existing children under sixteen years of age, and makes special allowance for multiple births. Maternity allowances are not subject to a means test.

At 31 December 1967 a mother with no other children under sixteen years of age was entitled to an allowance of \$30; where there were one or two such children the rate was \$32, and where there were three or more such children \$35. An extra amount of \$10 is paid for each additional child in multiple births.

Maternity Allowances, South Australia*Claims granted during year*

Category	1962-63	1963-64	1964-65	1965-66	1966-67
Single births :					
No other children under 16....	6,526	6,812	6,938	7,188	7,564
One or two children under 16..	9,904	9,735	9,622	9,493	9,501
Three or more children under 16	4,700	4,317	4,044	3,687	3,352
Multiple births :					
Twins	226	230	213	223	178
Triplets	1	2	3	3	1
Total	21,357	21,096	20,820	20,594	20,596

Unemployment and Sickness Benefits

Unemployment and sickness benefits are paid to persons who suffer temporary loss of regular earnings because of unemployment, sickness, or accident. There is a means test on income but not on property.

Persons eligible must be between sixteen and sixty-five years of age (sixty for women) with either twelve months residence or the intention to reside permanently in Australia. A person receiving an alternative pension (except a war pension) is ineligible for unemployment and sickness benefits. A married woman is not usually qualified to receive sickness benefit if her husband can support her.

To qualify for unemployment benefit a person must (a) be unemployed and be able to show that unemployment was not due to his being a direct participant in a strike, (b) be able and willing to undertake suitable work, and (c) have taken reasonable steps to secure work, including registration with the Commonwealth Employment Service.

Unemployment and Sickness Benefits, South Australia

Year	Unemployment		Sickness		Special (a)	
	Admitted to Benefit	Average Number on Benefit (b)	Admitted to Benefit	Average Number on Benefit (b)	Admitted to Benefit	Average Number on Benefit (b)
1962-63	11,782	2,244	5,274	760	129	135
1963-64	9,007	1,513	5,553	788	182	141
1964-65	6,711	800	5,685	728	124	131
1965-66	13,593	1,306	6,295	761	164	116
1966-67	22,812	3,094	6,424	871	151	112

(a) Excludes special benefits to migrants in accommodation centres.

(b) Average number at the end of each week.

The amount of income which a person may receive and still qualify for the maximum rate of benefit is \$4 per week for an adult or married person under twenty-one, and \$2 per week for a single person under twenty-one. The benefit is reduced by any amount in excess of these figures. For unemployment benefit the income of the claimant's spouse is taken into account.

At 31 December 1967 the maximum weekly benefits payable were \$8.25 for an adult or a married minor, \$4.75 for an unmarried minor eighteen to twenty years of age and \$3.50 for an unmarried minor sixteen to seventeen years of age. An additional \$6 weekly was payable for a dependent spouse, and \$1.50 for each child under sixteen years. A special benefit may be granted to a person not normally qualified for an unemployment or sickness benefit if he is unable to earn a sufficient livelihood for himself and his dependents.

Rehabilitation

The Commonwealth Rehabilitation Service assists people who are unable to work because of physical handicap or who have had to give up their employment because of sickness or injury. It aims at helping disabled people to reach their maximum physical fitness and to prepare for suitable employment. The service provides a co-ordinated programme of treatment and training to meet the special needs of each disabled person. Rehabilitation is provided free to persons receiving, or eligible to receive an invalid or widows pension, unemployment, sickness or special benefit. Recipients of tuberculosis allowance and children of fourteen and fifteen years otherwise likely to qualify for invalid pension at age sixteen are also eligible.

All rehabilitation activities in South Australia are concentrated at the Commonwealth Rehabilitation Centre, Felixstow. The centre has a treatment capacity of approximately 120, comprising forty residents and eighty non-residents.

When a person begins treatment he continues to receive his existing pension or benefit plus certain expenses. When vocational training begins the pension or benefit is suspended and a rehabilitation allowance is paid instead. Certain additional allowances may also be paid during the period of training. The rehabilitation allowance for an invalid pensioner or an unemployment, sickness, or special beneficiary is equal to and calculated in the same way as the pension for an invalid pensioner. A widow pensioner receives the same rate as under a widows pension.

The Commonwealth Employment Service works with the Rehabilitation Service to help find employment for disabled people. Loans may be granted to assist certain persons in the establishment of home employment.

Rehabilitation, South Australia

Year	Number Accepted for Rehabilitation	Number Placed in Employment	Expenditure (a)
			\$
1962-63	286	183	198,102
1963-64	249	216	211,724
1964-65	271	228	212,642
1965-66	298	187	203,382
1966-67	282	179	249,027

(a) Excludes capital expenditure by the Department of Works on sites and buildings, and administrative cost of the Rehabilitation Service.

Funeral Benefits

A funeral benefit is payable to the person who has paid, or is liable to pay, the cost of the funeral of an age or invalid pensioner or of a person who, but for his death, would have been granted an age or invalid pension.

A funeral benefit is also payable in respect of deceased tuberculosis allowees or to claimants for tuberculosis allowance who, but for their claim for tuberculosis allowance, would otherwise have been eligible for a pension.

At 31 December 1967 the maximum benefit payable was \$20, or \$40 if the person responsible for the funeral was a pensioner.

During 1966-67, 4,031 claims for funeral benefits were granted in South Australia.

Homes for the Aged

The *Aged Persons Homes Act 1954-1957* provides that grants may be made to certain organisations towards the capital cost of erecting or purchasing approved homes for aged people. Church, charitable and ex-servicemens organisations as well as any other organisation approved by the Governor-General are eligible.

Grants may not exceed two-thirds of the capital cost of the home including land or twice the amount (excluding borrowings and other government grants) raised by the organisation towards the capital cost, whichever is less.

At 30 June 1967, 325 grants had been approved in South Australia since the inception of the scheme in 1954. The amount granted, \$14,646,222, was associated with the accommodation of 5,362 persons.

Reciprocal Agreements

Agreements for reciprocity in the payment of certain pensions and benefits exist with New Zealand and the United Kingdom. The reciprocal agreements cover age, invalid and widows pensions, child endowment, unemployment and sickness benefits and the comparable social service benefits payable in these countries.

NATIONAL HEALTH SERVICES

Expenditure

The following table shows Commonwealth Government expenditure from the National Welfare Fund on the various aspects of the national health services. The amounts shown are the direct costs of these benefits and services and do not include the cost of administering the services.

National Health Services Expenditure, South Australia

Type of Benefit	Year First Paid	1962-63	1963-64	1964-65	1965-66	1966-67
				\$'000		
Hospital and nursing home benefits	1946	4,448	4,998	5,160	5,458	5,920
Medical benefits	1953	2,645	2,820	4,274	4,978	5,156
Pensioner medical service ...	1951	845	896	898	1,285	1,407
Pharmaceutical benefits	1948	4,669	4,900	5,110	5,670	6,256
Pensioner pharmaceutical benefits	1951	1,841	1,908	1,987	2,289	2,705
Anti-tuberculosis campaign ..	1947	892	838	743	755	750
Free milk for school children	1951	711	705	757	799	857
Miscellaneous	—	15	15	19	20	49
Total	—	16,066	17,080	18,948	21,254	23,100

Hospital Benefits

The Commonwealth pays hospital benefits to patients in approved hospitals and nursing homes under the following arrangements:

- (a) Patients insured with a registered benefit organisation and in an approved hospital receive a benefit (\$2 per day at 31 December 1967) paid through the organisation. Details of registered organisations are given on page 227.
- (b) Uninsured patients are entitled to a benefit (80c per day) which is deducted from the patient's account and paid by the Commonwealth to the hospital.
- (c) Pensioners enrolled with the pensioner medical service and their dependants in public wards of public hospitals are entitled to a special benefit (\$5 per day) which is paid to the hospital, no further charge being made on the pensioner by the hospital.

A Commonwealth nursing home benefit is paid for all qualified patients in approved nursing homes, whether the patient is insured or not. The benefit is deducted from the patient's account and paid by the Commonwealth to the nursing home. At 31 December 1967 this benefit was \$2 per day. Commonwealth benefit may not be payable where a patient receives a payment by way of compensation or damages.

Hospital Benefits, South Australia

Year	Procedure to 31 December 1962 (a)		Current Procedure				Total (b)
	Ordinary Benefits	Additional Benefits	Hospitals			Nursing Home Patients	
			Insured Patients	Uninsured Patients	Pensioner Patients		
				\$'000			
1962-63	914	1,346	614	58	358	616	3,906
1963-64	—	—	1,846	130	1,008	1,634	4,618
1964-65	—	—	1,921	122	1,099	1,778	4,920
1965-66	—	—	1,977	118	1,191	1,905	5,191
1966-67	—	—	1,939	111	1,582	2,009	5,641

(a) During this period the Commonwealth paid ordinary benefits of 80c or \$1.20 per day to all patients, and additional benefits of 40c, 80c, or \$1.20 per day to members of registered hospital benefit organisations.

(b) Excludes amounts paid to special account deficits (these being reimbursements to registered hospital benefit organisations for losses incurred on chronic or pre-existing ailments and long-term illness and advances in respect of these deficits).

Medical Benefits

Commonwealth medical benefits are paid in respect of medical expenses incurred by persons who are contributors to registered medical benefits organisations or by the dependants of such contributors. The benefits are normally paid through the organisations to the contributor upon receipt of a medical practitioner's account. Medical benefits organisations, with minor exceptions, also pay a fund benefit equal to or greater than the amount of the Commonwealth benefits. Commonwealth benefit may not be payable where a patient receives a payment by way of compensation or damages.

At 31 December 1967 Commonwealth medical benefits ranged from 80c for a general practitioner consultation to \$60 for certain major operations.

Commonwealth expenditure on medical benefits in this State in 1966-67 was \$5,111,000, representing 38 per cent of the cost of medical services for which benefits were payable. An additional \$45,000 was paid by the Commonwealth to registered benefit organisations to cover losses incurred in paying benefits in cases of chronic or pre-existing ailments and long-term illness.

Further details of medical benefits organisations are given on page 228.

Pharmaceutical Benefits

Under the Pharmaceutical Benefits Scheme certain medicines, when prescribed by a doctor are made available to the general public upon the payment of a 50c fee and to pensioners free of cost. The drugs and medicinal preparations available as pharmaceutical benefits are determined on the advice of the Pharmaceutical Benefits Advisory Committee which also recommends the maximum quantities that can be prescribed. Pharmaceutical benefits are normally obtained through registered pharmacists but most public hospitals may also supply pharmaceutical benefits, as may doctors and certain recognised organisations in isolated areas.

Pharmaceutical Benefits^(a), South Australia

Year	Number of Benefit Prescriptions	Cost of Benefit Prescriptions			Additional Costs to Commonwealth (b)
		Total Cost	Patients Contributions	Net Cost to Commonwealth	
	'000			\$'000	
1962-63.....	2,774	5,612	1,386	4,226	443
1963-64.....	n.a.	5,661	1,480	4,181	719
1964-65.....	n.a.	5,900	1,536	4,364	746
1965-66.....	3,362	6,730	1,679	5,051	619
1966-67.....	3,322	6,794	1,659	5,135	1,121

(a) Excludes pensioner benefits.

(b) Payments to hospitals and miscellaneous services.

n.a.—Not available.

Pensioner Medical Service

The pensioner medical service is a general practitioner service provided free of charge to eligible pensioners and their dependants. The service does not extend to specialist treatment, general anaesthetics or the treatment of fractures. Doctors participating in the service are remunerated by the Commonwealth on a concessional fee basis.

In addition to the general practitioner service, a full range of medicines is available free of cost upon presentation of a doctor's prescription.

Persons eligible for the pensioner medical service are those receiving an age, invalid, widows or service pension, and persons receiving a tuberculosis allowance. Dependent wives and children are also entitled to the benefits of the pensioner medical service.

Pensioner Medical and Pharmaceutical Benefits, South Australia

Year	Number of Pensioners and Dependants (a)	Commonwealth Payments for Services		
		Medical	Pharmaceutical	Total
	'000		\$'000	
1962-63	75	844	1,840	2,684
1963-64	77	896	1,908	2,804
1964-65	79	898	1,987	2,885
1965-66	92	1,285	2,289	3,574
1966-67	100	1,407	2,705	4,112

(a) Enrolled at end of year.

Anti-Tuberculosis Campaign

Since 1948 the Commonwealth has paid for all additional capital expenditure on tuberculosis clinics and hospitals and for any increase in the cost of diagnosis, treatment, and control of tuberculosis.

The Commonwealth also pays allowances to people suffering from tuberculosis to encourage them to give up work and undergo treatment. The allowances are subject to a means test on income. At 31 December 1967 the maximum income permitted before allowances are affected was \$7 per week for a single person and \$14 for a married person.

At 31 December 1967 the allowance for a married person with dependent wife was \$26.75 plus \$1.50 for each dependent child under sixteen years. A single person without dependants, if not hospitalised, received \$16.25 or if receiving hospital treatment free of charge \$13. Widows or widowers with dependent children under sixteen years received \$17.

Anti-Tuberculosis Campaign, South Australia

Commonwealth Expenditure	1962-63	1963-64	1964-65	1965-66	1966-67
			\$'000		
Allowances paid to sufferers	132	122	105	93	98
Maintenance expenditure (a)	778	736	666	690	708
Capital expenditure	27	30	13	14	5
Total	937	888	784	797	811

(a) Includes administrative expenses not paid from National Welfare Fund.

Free Milk for School Children

A Commonwealth reimbursement to the State Government permits the free distribution of one third of a pint of milk daily to school children attending public and private primary schools, kindergartens, creches and Aboriginal missions.

The State Government administers the scheme and the Commonwealth meets the cost of milk supplied and half the cost of capital, administrative and incidental expenditure. At 30 June 1967 the approximate number of children eligible to participate in the scheme in South Australia was 191,000 while the cost of the milk supplied during 1966-67 was \$857,000.

REPATRIATION BENEFITS

War Pensions

War pensions are paid by way of compensation to ex-servicemen and women who have suffered incapacity due to war service and to their eligible dependants, and to the dependants of those who have died due to war service.

There are four main classes of war pensions.

The special (T.P.I.) rate (\$30.50 per week at 31 December 1967) is payable to those who are deemed totally and permanently incapacitated.

The intermediate rate (\$21.25 per week at 31 December 1967) is payable to an ex-serviceman who, because of the severity of his war-caused incapacity, can work only part-time or intermittently and in consequence is unable to earn a living wage.

The general rate is payable to those who suffered war-caused disabilities but still retained some earning capacity. The pension payable depends on the degree of incapacity, the maximum at 31 December 1967 being \$12 per week. Pensions are also payable for a wife and each child under sixteen years of age under both special and general pensions.

The widows rate is payable to widows of ex-servicemen who died as a result of war service, and to any children under sixteen years of age. An additional domestic allowance is payable to certain classes of widows. At 31 December 1967 the widows rate was \$13 per week and the domestic allowance \$7.

War Pensions^(a), South Australia^(b)

Year	Pensions in Force at End of Year				Expenditure
	Incapacitated Ex-Servicemen	Dependants of Incapacitated Ex-Servicemen	Dependants of Deceased Ex-Servicemen	Total	
	Number				\$'000
1962-63 ..	21,037	40,657	4,871	66,565	12,348
1963-64 ..	21,106	39,462	5,033	65,601	13,500
1964-65 ..	21,104	37,711	5,016	63,831	13,209
1965-66 ..	20,969	35,566	5,033	61,568	14,633
1966-67 ..	20,796	33,754	5,075	59,625	13,613

(a) Excludes pensions payable under Seaman's War Pensions and Allowance Act and various Cabinet decisions.

(b) Includes Northern Territory.

Service Pensions

Service pensions are payable to ex-servicemen who served in a theatre of war and have reached the age of sixty years (fifty-five for women) or who are permanently unemployable. They are also paid to ex-servicemen suffering from pulmonary tuberculosis. The service pension is equivalent in amount to the social services age and invalid pensions and is subject to the same means test. It also confers eligibility for a full range of medical and dental treatment. The dependants of permanently unemployable or tuberculosis pensioners may continue to receive their appropriate allowance upon the death of the pensioner.

Service Pensions, South Australia^(a)

Year	Pensions in Force at End of Year				Expenditure
	Ex-Servicemen	Dependants of Pensioner Ex-Servicemen	Dependants of Deceased Pensioners	Total	
	Number				\$'000
1962-63 ..	5,028	1,334	312	6,674	2,486
1963-64 ..	5,159	1,340	323	6,822	2,689
1964-65 ..	5,202	1,222	328	6,752	2,766
1965-66 ..	5,200	1,238	342	6,780	3,025
1966-67 ..	5,250	1,308	363	6,921	3,134

^(a) Includes Northern Territory.**Medical Services**

The Repatriation Department provides in-patient treatment, general practitioner services, certain specialist facilities, pharmaceutical benefits and dental treatment for certain eligible persons. A comprehensive rehabilitation and social worker service is also available.

Medical treatment is provided for all disabilities due to war service and for pulmonary tuberculosis. General medical services are also available to service pensioners, war pensioners receiving the special, intermediate or maximum general rates, widows and dependants of ex-servicemen whose deaths were due to war service, and nurses who served in the 1914-18 War.

In-patient treatment is provided at the Repatriation General Hospital, Daw Park. Facilities at the Outpatient Clinic, Keswick, include radiological pathological, and physiotherapy services in addition to medical specialist examinations. The Repatriation Department also maintains an auxiliary hospital, 'Birralee', at Belair, a section of which is set aside for the treatment of tuberculosis patients. The Repatriation Artificial Limb and Appliance Centre, as well as attending to repatriation needs, provides appliances and services for other Government departments and certain philanthropic organisations.

Repatriation: Medical Services, South Australia^(a)

Year	In-Patients : Total Treated			Out-Patients : Number of Visits			Pharmaceutical Benefits
	Daw Park	Birralee	Other Hospitals	Keswick Clinic	Other Institutions	Visits to or by Medical Officer	
	Number						\$
1962-63	4,478	134	767	46,056	7,833	197,171	881,948
1963-64	4,748	138	696	45,060	15,651	198,559	880,226
1964-65	4,994	105	774	43,733	11,966	204,658	955,966
1965-66	5,147	163	817	44,067	15,149	192,120	1,032,979
1966-67	5,100	153	813	45,368	14,328	195,743	1,155,839

^(a) Includes Northern Territory.**Education and Training**

Assistance in education and training is provided, through the Repatriation Department, for children of ex-servicemen whose death, blindness or total and permanent incapacity was the result of war service. The Soldiers' Children Education Board guides and supervises the progress of children receiving such assistance (see page 158).

In certain circumstances vocational training is also provided for disabled ex-servicemen and widows of ex-servicemen.

The department is responsible under the *Defence (Re-establishment) Act 1965-1967* for the administration of the Vocational Training Scheme which is designed to provide national servicemen with post-discharge training where this is necessary for their effective resettlement.

Assistance is generally through the payment of allowances and fees, and the provision of books and equipment.

Other Services

Other assistance, through the Repatriation Department, includes gift cars for certain disabled ex-servicemen, aids for blinded ex-servicemen, tools-of-trade grants for trainees and business re-establishment loans. Funeral grants of up to \$50 are paid upon the death of certain ex-servicemen and dependants.

STATE WELFARE SERVICES

EXPENDITURE

The following table shows expenditure by the State on welfare services. This expenditure includes the work of the Department of Social Welfare and the Department of Aboriginal Affairs, the provision of transport concessions, and grants made to private welfare organisations.

State Expenditure on Welfare Services, South Australia
Net Cost to Consolidated Revenue Account^(a)

Service	1962-63	1963-64	1964-65	1965-66	1966-67
	\$				
Relief of destitute, aged, etc.	826,570	831,966	886,234	1,012,504	1,192,513
Child welfare:					
Institutions (b) ...	414,478	509,052	624,504	682,356	750,184
Other	367,700	410,910	450,910	530,829	638,534
Care of Aborigines ..	896,566	1,008,056	1,079,032	1,258,772	1,304,095
Other	118,988	121,318	79,407	176,429	221,700
Total	2,624,302	2,881,302	3,120,087	3,660,890	4,107,026

(a) Includes interest, maintenance of buildings, etc; excludes capital expenditure from Loan Fund.

(b) Excludes reformatories.

CHILD WELFARE AND PUBLIC RELIEF

The first official activity for the social welfare of children and adults was taken soon after colonisation. The early State immigration authorities cared for new arrivals, and sometimes immigrants were accommodated temporarily in tents on the parklands. A more permanent solution of the problems of the destitute came with the first Destitute Persons Relief Act in 1842. In 1867 a Destitute Board was formally appointed. This body assumed responsibility for the welfare of both children and adults. In 1886 a State Childrens Council was formed to deal with children, whilst the Destitute Board continued with its other work. The Children's Welfare and Public Relief Board was created by the Maintenance Act, 1926 to do the work of both these earlier authorities. The Chairman of the Board was the permanent head of the Children's Welfare and Public Relief Department.

In 1965 a new portfolio of Minister of Social Welfare was created. Subsequently the Children's Welfare and Public Relief Board was abolished under the Social Welfare Act, 1926-1965, and its powers and functions vested in the Minister of Social Welfare, a body corporate under the Act. The Department is now the Department of Social Welfare with the Director of Social Welfare as the permanent head.

In addition to its head office at Adelaide, the Department maintains district offices at Brighton, Enfield, Elizabeth, Port Adelaide, Port Augusta, Mount Gambier, and Whyalla while field officers work throughout the State.

Care and Supervision of Children

One of the major functions of the Department is the care and supervision of State children, these being children committed to the Department, either directly to a departmental institution or generally to the control of the Minister. A child up to eighteen years may be charged with an offence or with being a neglected or uncontrolled child. In any of these cases he may be made a State child. In most cases the committal is until eighteen years but a child between sixteen and eighteen years may be committed for any period between one year and two years provided that period does not expire before he reaches eighteen years. Where it is for the child's benefit committal may be extended until twenty-one years, or in special cases for girls, beyond twenty-one years. Delinquent children may receive training in one of the reformatories; neglected children may be cared for temporarily at other institutions. Uncontrolled children may be placed in reformatories or other institutions depending on the circumstances.

The McNally Training Centre at Magill and Brookway Park, a reformatory for junior boys at Campbelltown, are at present the only proclaimed reformatories for boys in South Australia. A new reformatory was completed in November 1967 at the Magill site. There are two proclaimed reformatories for girls. One is Vaughan House at Enfield, where a new building with modern accommodation and training facilities for approximately seventy girls was completed in 1965. This is the general reformatory for girls and is controlled and operated by the Department. The other girls reformatory, 'The Pines' at Plympton conducted by the Sisters of the Good Shepherd Congregation, is a proclaimed private reformatory controlled by the Minister for the training and rehabilitation of delinquent girls belonging to the Roman Catholic Church.

Neglected boys may be committed to the Glandore Boys Home while girls and very young children of both sexes are accommodated at Seaforth Home, Somerton Park. Children may be transferred to other departmental homes or institutions for care and training. Altogether the Department had nineteen official reformatories, other institutions and homes for children at the end of June 1967. These include Lochiel Park, a training centre for retarded boys, Struan Farm, a rural training centre at Naracoorte, two boys hostels and two girls hostels for selected older children attending school and six cottage homes where small groups of children of both sexes live in a family-like atmosphere. Windana, a remand home at Glandore is used to accommodate delinquent and neglected children of both sexes in four separate sections.

It is the policy of the Department to place children out of institutions as soon as possible. They may be allowed to live in their own homes under supervision or be placed in approved foster homes. In the larger institutions for neglected children and in the reformatories, departmental placing committees consider the circumstances of each child regularly and make recommendations regarding action to be taken for the child's benefit and welfare.

Details of the number of children committed to the Department in recent years are given in the following table. Of the 682 children committed during 1966-67, 177 were girls, of which all but forty-three were neglected or uncontrolled. Girls constituted approximately one-third of all State children at 30 June 1967.

State Children^(a), South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
Number of children newly committed during the year :					
Convicted of offences	362	371	406	403	443
Neglected	126	192	167	206	162
Uncontrolled	67	72	64	52	55
Truancy	14	20	12	16	12
From other States	—	—	—	—	10
Total	569	655	649	677	682
Number of State children at 30 June :					
Children in departmental institutions	426	515	564	532	454
Children not in institutions ..	1,840	1,972	2,078	2,237	2,421
Total	2,266	2,487	2,642	2,769	2,875

(a) Excludes children on remand, not committed (750 on remand during 1966-67).

The Department has a field staff of welfare officers and probation officers to supervise children living in the community. Welfare officers investigate allegations that children are neglected, ill-treated or uncontrolled. Family casework is carried out with a view to improving the circumstances of children and their parents. The homes of illegitimate children under twelve years of age and other children of that age not living with near relatives are visited. In addition to supervising committed delinquent children, probation officers also supervise children placed by Juvenile Courts on bonds where supervision is ordered. Children may be placed voluntarily by their parents or guardians under the supervision of departmental probation officers.

During 1966-67, in addition to State children, 634 children were placed on bonds requiring supervision by departmental officers; the total number of such children under supervision at 30 June 1967 being 1,040. A total of 312 children was under voluntary supervision. In addition to the above, 4,423 other children were subject to visitation by officers of the department.

Welfare officers and probation officers are also appointed as attendance officers under the Education Act to assist in the detection and prevention of school truancy. Medical and other specialists including psychologists are employed within the Department.

Licensing of Maternity Homes, Foster Parents, and Childrens Homes

Every foster parent caring for a child under twelve years of age for gain or reward must be licensed by the Department. The children who are fostered are visited by departmental officers. Maternity homes must also be licensed. Under the Social Welfare Act, 1926-1965, every childrens home providing permanent care for children under twelve years of age must also be licensed by the Department.

Adoptions

The first formal moves on an Australia-wide basis for new legislation came early in 1961 when an interstate conference was held to discuss legal and social aspects of adoption. Further conferences followed and after professional and other views had been considered model legislation was drafted. It was not intended that the draft model legislation should be used in its entirety by each State, but it was hoped that each State and each Commonwealth Territory would consider its existing legislation in the light of the draft and then determine what it should do. Most States and Commonwealth Territories have now introduced new legislation. Procedures are not uniform throughout Australia, nor were they uniform previously, but there are many similarities and the important principles are generally accepted.

The underlying principles of adoption may be summarised as follows:

- (a) The interests and welfare of the children should be paramount and their interest should be preserved.
- (b) Adoption orders should not be made unless the natural parents (or natural mothers, for illegitimate children) have properly consented or unless, in the interests of the children, their consents have been properly dispensed with by a Court.
- (c) From the time adoption orders are made the natural parents should cease to be the legal parents and the adoptive parents should have full parental rights and responsibilities as if in each case the child had been born into their family.
- (d) Adoption arrangements, which necessarily precede the legal formalities for adoption orders, should be the administrative responsibility of official or officially approved adoption agencies only. Adoption placements arranged by individuals over whom the community has no control should, in the interests of the children, be prevented.
- (e) Except where relatives are adopting and in a few other cases identities should not be disclosed and adoptions should be confidential and arranged without publicity.
- (f) Adoption orders from any part of Australia should be recognised throughout Australia and, so far as is practicable, adoption orders of other countries should also be recognised.

South Australia has had an Adoption of Children Act since 1925. The United Kingdom introduced its first adoption legislation in 1926. Some places, including New Zealand and Western Australia had their first adoption legislation before the end of the nineteenth century.

In 1966 a Bill to consolidate and amend the law relating to adoption was introduced into the South Australian Parliament. This Bill was based largely on the old Act and procedures. It also incorporated some of the provisions of the model legislation drafted by the interstate conferences where these provisions seemed to suit South Australian conditions. Other provisions were added by Parliament before the legislation was passed early in 1967. The new legislation is entitled the 'Adoption of Children Act, 1966-1967'. It was proclaimed to come into operation on 2 November 1967. On that date also the 'Adoption of Children Regulations, 1967' were made. These were gazetted on 9 November, 1967.

The new legislation continues, in the main, the previous South Australian adoption practices, some of which were previously implied but not expressed.

The main provisions are listed below:

1. The welfare and interests of the child concerned are paramount.
2. Adoption orders are made by Special Adoption Courts following formal applications after children are placed with prospective adopters by the Director of Social Welfare or approved private adoption agencies. Applications are not heard in open Court and there are restrictions on who may attend the hearings. The applicants and the child appear personally as required by the Court. The Director of Social Welfare is authorised to appear and report confidentially to the Court in the interests of the child.
3. Any charitable organisation may apply to the Director of Social Welfare to be approved as a private adoption agency. If the organisation has the necessary facilities and is considered by the Director to be suited to deal with adoption arrangements it will be approved for this work subject to prescribed conditions. If approval is not given the organisation may appeal to the Supreme Court.
4. Consents to adoption must normally be given by the child's parents (or mother only if the child is illegitimate) and any guardian. An Adoption Court may, however, dispense with a consent if the person concerned cannot be found, or is not capable of considering the matter, or has abandoned or persistently neglected the child, or has failed without reasonable cause to discharge the obligations of a parent for a year or more. Consents must be given formally and with a full knowledge of the consequences. Once given a consent can be revoked only by formal notice given to the Director of Social Welfare within thirty days of the signing of the consent. Whilst general consents are effective the Director is, until adoption orders are made, the legal guardian of the children.
5. Before a child may be placed with any persons for adoption those persons must be approved and registered by the Director of Social Welfare. If the Director refuses an application the applicants may appeal to an Adoption Court sitting at Adelaide. Approvals are not necessary where children are placed with relatives (as defined) for adoption, but Adoption Courts must nevertheless be satisfied as to the suitability of the relatives before adoption orders are made.
6. The right to place children for adoption is restricted to the Director of Social Welfare and to approved private adoption agencies. The names of these agencies will be published as they are approved. Private persons and unauthorised agencies are not permitted to place children for adoption or make adoption arrangements nor may a child's parents place their own child with any other persons for adoption unless those persons are relatives or the arrangements are authorised by the Director and/or by an approved agency. These provisions are included in the legislation in order to ensure as far as possible that the placements are the best that can be arranged for the children.
7. Before the Director of Social Welfare or an approved agency places a child for adoption the Director or the agency must obtain medical reports on the health of the prospective adopters and the child and also, if practicable, on the health of the child's mother. In selecting approved prospective adopters for a particular child the Director or agency is required to determine the couple most suitable for the child. Any wishes about religious upbringing expressed by the child's parents must be considered. Subject to suitability applicants who have been registered longest are given priority.

8. Except for adoptions by relatives and in a few other cases (mainly older children) adoptive parents will not normally know the identity of the child nor will the child's parents know the identities of the adopter. To preserve secrecy there are procedures to be carried out by the Director of Social Welfare and the parties concerned.
9. The period between placement of a child with prospective adopters and the formal hearing by an Adoption Court varies but is usually upwards of three months. In the past prospective adopters have been anxious to have the case heard as soon as possible because consents could be withdrawn at any time. With the new provision of non-revocability of consents after thirty days there will no longer be the same urgency.
10. Once an adoption order is made the child becomes the child of the adopters and they become his legal parents as if he had been born to them in lawful wedlock. The relationship between the child and his previous parents ceases. So far as property is concerned the adoption does not operate to deprive the child of any right acquired by him before the adoption order is made and he is subsequently entitled to dispositions of property as the child of his adopters unless a will or other instrument distinguishes between adopted children and other children.
11. Adoption orders, which are intended to be permanent, can be discharged but only by the Supreme Court. The Court must be satisfied that the child has not attained the age of twenty-one years and that the order was obtained by fraud or other improper means or that there is some other exceptional reason. Discharges will be rare. If an adoption is unsuccessful the situation will be similar to any other unsuccessful parent/child relationship. The remedy will be action to improve the relationship. If this fails it may occasionally be necessary to place the child formally under another guardian or even to arrange for his re-adoption by other people.
12. Adoptions made on other Australian States are recognised in South Australia and similarly South Australian adoptions are, by legislation in those States, recognised there. Adoptions made in other countries are recognised in South Australia (and in other States) if they are adoptions of a type normal to this country, but a Court may refuse to recognise an adoption made in another country if the law applied there 'did not comply with the requirements of substantial justice'.
13. When an adoption order is made the Court is required to notify the Principal Registrar of Births, Deaths and Marriages who must then make certain entries in his records. There is provision for the exchange between States of information about adoptions in one State affecting birth registration records in another State. Certified copies of or extracts from the original entry of the child's birth are no longer available when a child is adopted. The Principal Registrar is, however, authorised to issue extracts or certified extracts from the new entries for the child. Certified extracts do not show the fact of adoption. They are designed to replace the old certified copies which, being exact copies, necessarily showed that the child had been adopted.
14. Confidentiality on adoption arrangements is considered to be important. The Act provides that no person may publish the identities of prospective adopters or of children to be adopted. No person may publish an indication that he wishes to adopt or give a child for adoption. Court records, Departmental records and agency records are confidential and not available for public inspection.

15. The fee for an application to an Adoption Court is \$10. In most cases only the application for an adoption order is necessary. Occasionally there may be ancillary applications, for each of which a separate fee is payable. No fee is payable on any application to the Director of Social Welfare nor is there a charge for services of the Department of Social Welfare. The Director is authorised to approve payments made by adopters for hospital and medical expenses reasonably incurred in connection with the birth of the child and a Court or the Director may authorise other payments. Unless authorised under these provisions a private adoption agency may not charge for its services. Similarly it is unlawful for any other group or person to give or receive unauthorised payments in connection with the signing of consents, the transfer of children for adoption or any other adoption matter.

Number of Adoptions, South Australia

Age of Child	1962-63	1963-64	1964-65	1965-66	1966-67
Under one year	404	400	506	551	572
One year and under two	37	27	24	39	30
Two years and under seven	119	107	94	81	237
Seven years and over	84	85	93	112	
Total	644	619	717	783	839

Immigrant Children

The Department makes inquiries regarding accommodation and supervision of proposed migrants under twenty-one years of age, who will not be living with a parent or near relative. Under the Commonwealth Immigration (Guardianship of Children) Act, the Minister becomes guardian of these children who numbered forty-three at 30 June 1967.

Legal Services

Prosecutions for neglected, ill-treated and uncontrolled cases are carried out by departmental officers who may also appear in Court where State children are involved. The Department assists the Courts by providing reports on the circumstances of children whose cases are considered by the Courts.

The Department assists deserted wives and others to obtain maintenance from their husbands. When negotiations fail, legal proceedings may be instituted to obtain Court orders for protection, separation, custody of children and maintenance. The Department collects and pays to deserted wives about 1,150 separate amounts weekly. Assistance is given to mothers of illegitimate children in affiliation cases.

Public Relief

The Department issues relief to those in destitute circumstances. The relief is issued mainly in cash, although occasionally an order for accommodation or food may be issued. During 1966-67 relief was issued to 3,853 applicants, representing 12,247 persons. Deserted wives accounted for 23 per cent and unemployed for 44 per cent of the total cases issued with relief.

The Department maintains a home at Magill for destitute or necessitous adults, mostly pensioners. The daily average occupancy of the Magill home was 169 during 1966-67.

To deal with cases of emergency the Department has a staff of housekeepers who are provided for full-time service in homes where there are children and the mother is temporarily sick or incapacitated. A charge is made for this service.

Expenditure

Details of expenditure by the department in its various functions are given in the following table.

Department of Social Welfare, South Australia

Net Cost to Consolidated Revenue Account^(a)

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
	\$				
Payments:					
General administration	123,898	140,950	163,974	211,843	247,591
Supervision and maintenance of children;					
In institutions	719,438	792,942	908,174	1,081,914	1,179,932
Placed out	286,348	313,808	343,018	393,067	467,206
Outdoor relief	331,662	324,888	307,866	411,252	514,721
Indoor relief at Magill home ..	332,000	342,438	371,742	397,203	435,093
Other	170,830	206,568	301,980	285,021	322,215
Total	1,964,176	2,121,594	2,396,754	2,780,300	3,166,758
Receipts	348,220	372,434	394,218	385,228	382,853
Net cost to Consolidated Revenue	1,615,956	1,749,160	2,002,536	2,395,072	2,783,905

(a) Most capital expenditure is met from Loan Fund.

ABORIGINAL WELFARE

Aboriginal welfare in South Australia is administered by the Minister of Aboriginal Affairs, under legislation provided in the Aboriginal Affairs Act, 1962-67. This Act aims at promoting the welfare of full-blood Aborigines and other persons with Aboriginal blood by providing facilities for guidance in all matters—business, domestic or social—and in some instances by providing financial assistance.

Although all Aborigines and persons of Aboriginal blood are entitled to assistance, they are not obliged to accept it and may if they desire continue to live according to age-old customs.

Training in manual skills is provided and when an appropriate stage of development has been reached, employment is found in urban or country districts. If necessary, houses are built and let at a rental appropriate to the tenant's means.

When it is desirable for purposes of education, or because of the home environment, contributions are made towards the cost of maintenance of children placed in foster homes or institutions. Secondary education is encouraged and financial assistance is given where required.

Relief either in the form of money or goods is made available:

- (a) to supplement food of the near primitive people residing in pastoral areas, and
- (b) to unemployed, sick, infirm, widowed, or aged, where social service benefits are not available.

Aboriginals are eligible to receive Commonwealth social service benefits and assistance is given in lodging applications and in the proper use of funds so provided. The Department of Aboriginal Affairs maintains reserves at Point Pearce, Point McLeay, Gerard, Coober Pedy, North-West Reserve, Koonibba and Davenport, and financial assistance is granted to church missions assisting Aboriginal people. A new northern reserve, Indulkana, was established during 1967-68. A home for Aboriginal women is conducted by the department at North Adelaide.

Aboriginal Welfare: Cost of Services, South Australia, 1966-67

Item	Reserves								Total (a)
	Point Pearce	Point McLeay	Davenport	North West	Coober Pedy	Gerard	Koonibba	Indulkana	
	\$								
Payments:									
Food, clothing, medical, educational, etc. . . .	5,106	490	6,710	3,084	2,407	771	1,866	—	110,987
Employment of Aboriginals . .	74,837	31,720	60,198	19,961	6,003	43,096	30,042	—	298,381
Maintenance of Children in homes and institutions . .	—	—	—	—	—	—	—	—	77,500
Grants to non-departmental missions	—	—	—	—	—	—	—	—	28,065
Purchases of land, buildings, plant and equipment	91,934	17,413	32,503	37,372	4,855	12,964	18,222	8,217	330,934
Salaries of administrative, welfare and supervising officers	22,431	20,767	21,185	21,829	10,429	18,817	18,121	—	362,190
Other	39,778	24,264	28,512	27,942	9,399	17,665	18,027	—	290,974
Total	234,086	94,654	149,108	110,188	33,093	93,313	86,278	8,217	1,499,031
Receipts	62,014	13,555	11,199	3,764	296	9,440	19,412	—	182,077
Net cost to State Government . . .	172,072	81,099	137,909	106,424	32,797	83,873	66,866	8,217	1,316,954 (b)

(a) Including payments and receipts in relation to other than reserves.

(b) Total cost varies from that shown in the table on page 218 by the inclusion of expenditure on payroll tax and superannuation.

Legislation passed by the State Parliament in recent years specifically affecting Aboriginals includes the removal of the prohibition on the sale of alcoholic liquor to Aboriginals, the establishment of the Aboriginal Lands Trust to ensure land rights to Aboriginals, the establishment of Aboriginal Reserve councils and business undertakings and an Act to prohibit the discrimination against persons by reasons of their race and colour.

The Commonwealth Government was prohibited by the Constitution from making laws specifically for 'the aboriginal race in any State'. However, the referendum held on 27 May 1967 and approved by a large majority of voters empowered the Commonwealth Government to remove the prohibition from the Constitution which was accomplished by legislation being passed in August 1967. At the 1966 Census 5,505 persons (2,914 males and 2,591 females) were reported as having 50 per cent or more Aboriginal blood.

OTHER WELFARE ACTIVITIES

The State Government has an agreement with various transport authorities for the carriage of certain disabled persons, pensioners and ex-servicemen on public transport either free of charge or at a reduced fare. The cost to the

Government of this service in 1966-67 was \$525,000, which included fare concessions of \$326,900 to pensioners, \$20,000 to blind persons, and \$163,400 to blind and incapacitated ex-servicemen.

The Government through the Chief Secretary also makes annual grants to various charitable agencies and institutions. In 1966-67 these included \$102,000 to the Royal Institution for the Blind; \$35,000 for Meals on Wheels; \$22,000 for Aged Citizen Clubs; \$17,500 for Aged Persons Homes and \$18,000 for the Mentally Retarded Children's Society.

PRIVATE WELFARE SERVICES

There are numerous charitable and benevolent organisations working within South Australia. A large proportion of these derive at least part of their revenue from regular donations, subscriptions and income from bequests; nearly all derive revenue from special functions. A number also receive Commonwealth, State or local government grants.

The Collections for Charitable Purposes Act, 1939-1947, requires the registration of charitable organisations before they may actively solicit funds.

Organisations which have a wide range of activities include the Australian Red Cross Society, the welfare bureaux and missions of the various churches, and organisations catering for ex-servicemen and their dependants. Most of such agencies maintain full-time staff and generally employ professional social workers. Other organisations cater for more specific needs, covering a wide range of physical and sociological disabilities. This includes the care of physically and mentally handicapped persons such as crippled children, the blind, deaf-mutes and alcoholics; also of specific groups such as aged persons, Aborigines and migrants. Many of these organisations depend largely or entirely on voluntary aid.

For details of the numerous bodies concerned with social welfare, reference should be made to the *Directory of Social Agencies* published jointly by the South Australian Council of Social Services and the Department of Public Health.

For those in need, the Citizens Advice Bureau advises on how to benefit from and how to use wisely the many services provided by the Commonwealth and State Governments and the various voluntary organisations.

REGISTERED MEDICAL AND HOSPITAL ORGANISATIONS

Commonwealth medical benefits and certain hospital benefits operate on the principle of Commonwealth support of voluntary insurance towards meeting medical and hospital expenses. For access to these benefits persons must be insured with a registered organisation. These are non-profit organisations and include a number of Friendly Societies. In most cases both medical and hospital benefits are provided by the one organisation.

Registered Hospital Organisations, South Australia

Particulars	Unit	1962-63	1963-64	1964-65	1965-66	1966-67
Registered organisations (a) ..	No.	13	13	13	13	13
Membership (a)	'000	350	367	382	387	403
Estimated persons covered (a)	'000	822	877	920	932	971
Fund benefits paid	\$'000	4,394	4,551	5,328	5,941	6,835

(a) At end of period.

For hospital benefits the contributions (premiums) depend on the scale of fund benefits required, with separate rates for single persons and for married persons and their dependants.

Although a number of different scales of benefit are available from registered medical organisations, there is one scale which is used predominantly; at 1 January 1968 this provided benefits (to which Commonwealth benefits were added) ranging from 80c for a general practitioner consultation to \$90 for certain major operations. Increases in benefits from 1 March 1968 for the top ranges of major operations brought the maximum fund benefit for an operation to \$120. Contributions can be made to give either individual or family cover.

Details of registered medical organisations are given in the following table. The number of members has increased steadily over the past thirteen years from 152,000 at 30 June 1954 to 373,000 in 1967. In this period the number of professional services per member increased from 3.55 in 1953-54 to 9.00 in 1966-67 with most of the increase occurring in the mid-1950s.

The table shows also a decrease in the proportion met by members of the costs for which benefits are payable from 32.4 per cent in 1963-64 to 22.9 per cent in 1965-66; this was due to the introduction on 1 June 1964 of a new schedule which provided for increased Commonwealth benefits, and to increased fund benefits for increased contributions introduced by the registered organisations on 1 April 1965. Over the same period the percentage of cost met by Commonwealth benefit increased from 29.2 to 39.4 and that met by the fund fell slightly. In 1966-67 the proportions met by members and by fund benefit each rose slightly.

Registered Medical Organisations, South Australia

Particulars	Unit	1962-63	1963-64	1964-65	1965-66	1966-67
Registered organisations (a) ..	No.	8	8	8	8	8
Members (a) ..	'000	309	330	349	356	373
Estimated persons covered (a)	'000	769	819	867	886	925
Cost of medical services:						
Met by fund benefit (b)	\$'000	3,394	3,657	4,013	4,712	5,128
Met by Commonwealth benefit (b)	\$'000	2,607	2,781	4,230	4,933	5,111
Met by insured member	\$'000	2,816	3,095	3,111	2,869	3,202
Total	\$'000	8,817	9,533	11,354	12,514	13,441
Fund benefits for ancillary services (c) ..	\$'000	101	109	190	223	237
Professional services per member:						
General practitioner	No.	6.20	6.05	6.23	6.29	6.29
Other	No.	2.52	2.30	2.41	2.64	2.71
Total	No.	8.72	8.35	8.64	8.93	9.00

(a) At end of period.

(b) The Commonwealth figure excludes amounts paid to special account deficits (these being reimbursements to registered benefit organisations for losses incurred on chronic or pre-existing ailments and long-term illness). Such amounts have been included under cost to fund.

(c) Services for which Commonwealth benefits are not provided.

FRIENDLY SOCIETIES

Friendly Societies are mutual organisations paying medical, hospital and other benefits to members and dependants in time of need.

These societies are required to register under the Friendly Societies Act, 1919-1961. The Act is administered by the Chief Secretary through the Public Actuary who approves the table of contributions, the level of benefits and generally sees that the societies' rules and practices are in accordance with the law.

A number of Friendly Societies are registered to pay Commonwealth medical and hospital benefits (see previous section), while others re-insure such benefits through a society created for this purpose.

Other benefits offered by the societies include sickness, funeral, pharmaceutical and physiotherapy benefits; endowment assurance is also available. The Friendly Societies Act requires that separate funds be maintained for each of these benefits and members may contribute for all or for only a selection of benefits. However, a person is considered to be a full benefit member only if he contributes for sick pay and funeral benefits regardless of contributions for other benefits.

The level of benefits paid varies between societies, with sickness benefits generally on a declining scale as the period of illness lengthens. The Friendly Societies Act limits to \$4,000 any payment for endowment or funeral benefits and to \$21 any weekly payment to members for sickness or superannuation.

Friendly Societies, South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
Number of registered societies (a)	14	14	14	14	14
Number of members (a) (b)	50,765	50,946	51,258	51,184	51,001
	\$'000				
Revenue (c):					
Contributions and levies	3,532	4,013	4,687	5,836	6,562
Interest, dividends and rent..	621	642	672	698	755
Other.....	376	370	476	475	673
Total revenue.....	4,529	5,024	5,835	7,009	7,990
Expenditure (c):					
Sick pay	171	178	188	179	188
Medical attendance and medicine	1,411	1,566	1,780	2,094	2,305
Sums payable at death	119	128	125	125	139
Hospital benefits	1,451	1,522	1,858	2,116	2,441
Administration	659	752	837	910	997
Other.....	203	235	340	420	565
Total expenditure	4,014	4,382	5,128	5,843	6,635
Total funds	12,346	12,989	13,696	14,862	16,217

(a) At 30 June.

(b) Full benefit members; does not include those who contribute to medical and hospital benefits only.

(c) Receipts and payments of Commonwealth medical and hospital benefit subsidies excluded.

The Friendly Society Medical Association operates twenty-nine pharmacies in the metropolitan area and one at Port Pirie where medicines are dispensed for Friendly Society members at concession prices.

The Friendly Societies Act also prescribes the nature of assets which societies may hold. Their most important investment is in property mortgages and in particular in housing loans to members. They may also invest in governmental securities, and a number of societies own valuable city freeholds.

6.7 MARRIAGE

Registration of marriage has been compulsory in South Australia since 1842 when Acts 'for regulating Marriages in the Province of South Australia' and 'for registering Births, Deaths and Marriages in the Province of South Australia' were passed. The present law relating to marriages is contained in the Commonwealth *Marriage Act* 1961-1966 which was assented to on 6 May 1961. This Act, which applies to all the States, the two mainland Territories and Norfolk Island, came into full operation on 1 September 1963, some of its minor provisions having been in operation from the date of assent. The South Australian Act superseded by the Commonwealth legislation was the *Marriage Act*, 1936-1957.

The Principal Registrar of Births, Deaths and Marriages in South Australia carries out the statutory duties under the Act and has supervision over ministers of religion (as regards their duties under the Marriage Act) and other officers empowered to perform marriages. Only the Principal Registrar, the Deputy Registrar, District Registrars appointed to the twenty-two registration districts, authorised ministers of religion and other authorised celebrants may celebrate marriages.

After the marriage, celebrants are required to forward the official certificate of marriage to the Principal Registrar who maintains at his office a register of all marriages in South Australia. In addition, a copy of the marriage certificate is prepared and forwarded by the office of the Principal Registrar to the District Registrar of the district in which the marriage was celebrated and each District Registrar maintains a register of the marriages performed in his district.

The average annual number of marriages and the rates per 1,000 of mean populations in selected ten-yearly periods since 1906 and numbers and rates for each of the most recent six years are shown in the following table.

Marriages, South Australia

Ten-Year Period	Average Annual Number of Marriages	Rate per 1,000 of Mean Population	Year	Number of Marriages	Rate per 1,000 of Mean Population
1906-15	3,596	8.86	1962.....	7,021	7.12
1916-25	3,978	8.16	1963.....	7,302	7.24
1926-35	4,001	6.97	1964.....	7,765	7.50
1936-45	6,122	10.14	1965.....	8,680	8.16
1946-55	6,436	8.92	1966.....	9,051	8.29
1956-65	7,016	7.35	1967.....	9,434	8.49

During the period from 1852 to 1858 the marriage rate varied between about 10 and 13 per 1,000 of mean population, then fluctuated but gradually declined to 5 in 1897. It then rose steadily to 9.86 in 1911, fluctuated considerably during the 1914-18 War then levelled to about 8 in the 1920s. The conditions in the period leading up to and during the depression of the early 1930s brought about a marked decline to 5.3 in 1931. By 1938 the rate had risen to 9.3 and during the subsequent war years of 1939-45 it rose to 13.3 in 1942, the highest ever recorded, then fell to 8.5 in 1945. Following the return and demobilisation of servicemen the rate rose to over 10 in the years 1946-48 then fell steadily to 7.0 in 1960. Since 1960 the rate has risen in each successive year. The decline to 1960 in the marriage rate is related to the effect of the low birth rate of the depression years on the number of persons reaching the normal marrying age.

Particulars relating to first marriages and remarriages annually since 1958 are shown in the following table.

Marital Status of Persons Marrying, South Australia

Year	Bridegrooms			Brides			Percentage of Total Married					
							Bridegrooms			Brides		
	Bachelors	Widowers	Divorced	Spinsters	Widows	Divorced	Bachelors	Widowers	Divorced	Spinsters	Widows	Divorced
1958.....	5,830	317	358	5,753	319	433	89.6	4.9	5.5	88.4	4.9	6.7
1959.....	5,937	310	367	5,853	352	409	89.8	4.7	5.5	88.5	5.3	6.2
1960.....	5,966	289	352	5,870	323	414	90.3	4.4	5.3	88.8	4.9	6.3
1961.....	6,085	295	424	6,006	336	462	89.4	4.4	6.2	88.3	4.9	6.8
1962.....	6,318	268	435	6,284	302	435	90.0	3.8	6.2	89.5	4.3	6.2
1963.....	6,611	277	414	6,516	305	481	90.5	3.8	5.7	89.2	4.2	6.6
1964.....	7,052	285	428	7,034	282	449	90.8	3.7	5.5	90.6	3.6	5.8
1965.....	7,878	286	516	7,838	325	517	90.8	3.3	5.9	90.3	3.7	6.0
1966.....	8,168	323	560	8,165	306	580	90.2	3.6	6.2	90.2	3.4	6.4
1967.....	8,595	312	527	8,542	332	560	91.1	3.3	5.6	90.5	3.5	6.0

Prior to 1951, in each year except 1946, the number of widowers remarrying exceeded the number of widows remarrying, but since then the reverse has been the case except for 1964 and 1966.

More divorced males than divorced females remarried in most years to 1940, but the reverse has been so in twenty-two of the twenty-seven years since 1940 including all but one of the last seventeen years.

The following statement shows age at marriage of bridegrooms and brides who were married during 1966 classified by marital status.

Age at Marriage and Marital Status, South Australia, 1967

Age	Marital Status at Marriage							
	Bridegrooms				Brides			
	Bachelors	Widowers	Divorced	Total	Spinsters	Widows	Divorced	Total
Under 21 years	1,480	—	—	1,480	4,312	4	1	4,317
21 to 24 years	4,401	3	9	4,413	3,343	6	43	3,392
25 to 29 years	1,858	6	59	1,923	594	13	112	719
30 to 34 years	454	10	89	553	126	24	92	242
35 to 39 years	198	19	107	324	62	25	92	179
40 to 44 years	98	30	81	209	46	34	87	167
45 years and over ..	106	244	182	532	59	226	133	418
All ages...	8,595	312	527	9,434	8,542	332	560	9,434

In the following table of percentages of bridegrooms and brides in various age-groups the earliest available figures in each sector have been shown together with figures for selected later years.

**Age Distribution of Bridegrooms and Brides: Percentage to Total Marriages
South Australia**

Year	Under 21 Years	21 to 24 Years	25 to 29 Years	30 to 44 Years	45 Years and Over	Under 21 Years	21 to 24 Years	25 to 29 Years	30 to 44 Years	45 Years and Over
ALL BRIDEGROOMS					ALL BRIDES					
1903....	2.7	27.8	35.8	28.5	5.2	19.2	37.5	26.7	14.7	1.9
1911....	3.3	28.7	37.1	25.6	5.3	17.1	37.4	28.3	14.7	2.5
1921....	3.2	25.6	36.8	29.0	5.4	16.1	35.9	28.2	17.0	2.9
1931....	6.8	30.8	33.7	22.8	5.9	25.8	37.2	21.2	12.9	2.9
1941....	4.1	32.5	34.6	22.9	5.9	20.5	38.8	22.4	15.0	3.3
1951....	6.2	37.3	28.1	20.6	7.8	27.8	36.6	15.8	14.6	5.2
1961....	10.6	40.9	24.2	17.5	6.8	40.8	34.4	9.7	9.6	5.5
1963....	11.3	44.0	23.0	15.4	6.3	42.9	34.1	9.3	8.7	5.0
1964....	12.7	44.2	23.6	13.8	5.7	44.4	35.0	8.3	8.0	4.3
1965....	14.7	44.2	22.8	12.4	5.9	45.1	35.1	8.2	7.1	4.5
1966....	15.3	45.4	21.9	11.8	5.6	45.4	35.1	8.3	6.7	4.5
1967....	15.7	46.8	20.4	11.5	5.6	45.8	36.0	7.6	6.2	4.4
BACHELORS					SPINSTERS					
1928....	5.8	33.4	37.4	21.1	2.3	23.9	40.5	22.5	12.1	1.0
1931....	7.4	33.2	35.9	21.0	2.5	27.3	39.2	21.8	10.7	1.0
1941....	4.5	35.0	37.0	21.6	1.9	21.9	41.4	23.0	12.7	1.0
1951....	7.1	42.5	30.9	16.9	2.6	31.8	41.5	15.8	9.2	1.7
1961....	11.9	45.5	26.3	14.9	1.4	46.1	38.2	9.3	5.3	1.1
1963....	12.5	48.5	24.7	12.7	1.6	47.8	37.8	8.9	4.4	0.9
1964....	13.9	48.5	25.3	11.1	1.2	49.0	38.1	8.1	4.0	0.8
1965....	16.1	48.6	24.4	9.7	1.2	49.9	38.4	7.6	3.3	0.8
1966....	16.9	50.0	23.2	8.7	1.0	50.2	38.2	7.6	3.2	0.8
1967....	17.2	51.2	21.7	8.7	1.2	50.5	39.1	7.0	2.7	0.7

In 1967, 68.4 per cent of first marriages of men and 89.6 per cent of first marriages of women were of persons who were under twenty-five years of age. This compares with the 1928 figures of 39.2 per cent and 64.4 per cent respectively.

The following table shows the average age of bridegrooms and brides during the last ten years. From 1908 to 1955 there was little change in the average age of all bridegrooms and all brides—from 29.4 years to 29.2 years for bridegrooms and from 25.9 to 26.0 for brides, with some minor fluctuations in between which can be related to the two World Wars and the depression of the early 1930s.

Average Age at Marriage, South Australia

Year	Bridegrooms				Brides			
	Bachelors	Widowers	Divorced	All Bridegrooms	Spinsters	Widows	Divorced	All Brides
1958.....	26.3	56.3	39.9	28.5	22.9	49.5	36.6	25.1
1959.....	26.2	57.7	40.6	28.5	22.8	48.4	37.4	25.1
1960.....	25.6	56.3	41.2	28.0	22.5	49.0	36.7	24.7
1961.....	25.8	57.1	41.2	28.1	22.4	49.1	36.9	24.7
1962.....	25.8	56.9	42.5	28.0	22.4	49.3	38.8	24.6
1963.....	25.5	55.0	41.5	27.5	22.1	49.8	37.8	24.3
1964.....	25.2	55.6	41.9	27.2	22.0	49.2	38.6	24.0
1965.....	24.9	56.0	42.3	26.9	21.8	51.4	37.8	23.9
1966.....	24.7	55.4	40.6	26.8	21.8	51.6	37.3	23.8
1967.....	24.6	56.0	41.8	26.6	21.8	50.4	37.9	23.7

The average age of all bridegrooms and brides rose slightly between 1942 and 1955 but has subsequently fallen. On the other hand, average age of previously unmarried bridegrooms and brides has fallen steadily since 1942, from 27.4 to 24.6 and from 24.6 to 21.8 respectively. This tendency during the last twenty years towards marrying younger is presumably influenced by the availability over that period of employment to married women.

MARRIAGE OF MINORS

The Commonwealth *Marriage Act* 1961-1966 stipulates the marriageable age to be eighteen years or over for a male and sixteen years or over for a female. Under exceptional circumstances a magistrate can, upon application by a party who has not attained marriageable age but who is at least sixteen in the case of a male or fourteen in the case of a female, authorise him or her to marry a particular person who is of marriageable age.

South Australian legislation operative prior to the Commonwealth Act, and proclaimed on 1 March 1958, provided that a marriage between persons either of whom was a boy under the age of eighteen years or a girl under the age of sixteen years should be void, with further provision, upon application, for the Chief Secretary at his discretion to waive the provisions in relation to males aged fourteen to seventeen years and females aged twelve to fifteen years. Prior to this it had been the practice to apply the provisions of British Common Law prohibiting the marriage of either a male under fourteen or a female under twelve.

In all cases where a party to a marriage is under twenty-one years, prior consent must be obtained from either both parents, one parent, a guardian or guardians, or other prescribed authority, according to the circumstances.

Figures for the first year for which information of marriages of minors is available and for the last five years are shown in the following table.

Marriages of Minors, South Australia

Year	Age in Years							Total Minors	Percentage of Total Marriages
	14 or Less	15	16	17	18	19	20		
BRIDEGROOMS									
1903.....	—	—	—	—	8	14	38	60	2.65
1963.....	—	—	2	25	132	258	409	826	11.31
1964.....	—	—	2	24	185	305	466	982	12.65
1965.....	—	—	—	16	226	436	598	1,276	14.70
1966.....	—	—	1	19	221	518	624	1,383	15.28
1967.....	—	—	2	19	228	513	718	1,480	15.69
BRIDES									
1903.....	—	5	12	45	93	135	143	433	19.16
1963.....	1	8	206	366	641	911	996	3,129	42.85
1964.....	2	11	178	454	698	971	1,135	3,449	44.42
1965.....	—	9	193	462	895	1,124	1,231	3,914	45.09
1966.....	3	5	188	425	834	1,375	1,275	4,105	45.35
1967.....	1	4	179	440	823	1,265	1,605	4,317	45.76

From 1903 to 1928 the proportion of bridegrooms under twenty-one remained under 5 per cent with a general upward trend interrupted during and in the years immediately after the 1914-18 War. The proportion continued to rise to a figure of 6.8 per cent in 1931 then fell steadily to 3.1 per cent in 1939. From that year there has been a further general upward movement, again with an interruption in the years immediately following the 1939-45 War.

The proportion of brides under twenty-one has followed a similar pattern, remaining under 20 per cent until 1925, rising to 25.8 per cent in 1931, falling

to 16.3 per cent in 1936 and generally maintaining an upward trend from 1939. Proportions have risen each successive year from 1954 for male minors and from 1950 for female minors.

RELIGIOUS DENOMINATION OF MARRIAGES

The number of marriages celebrated in South Australia by ministers of religion in 1967 was 8,446 representing 89.5 per cent of the total. Civil marriages numbered 988, or 10.5 per cent of the total. The following table shows the number and proportion of civil marriages and of marriages solemnised according to the rites of the principal religious denominations during the last four years.

Denomination of Marriage Ceremony, South Australia

Denomination	Number of Marriages				Proportion of Total Marriages			
	1964	1965	1966	1967	1964	1965	1966	1967
Baptist	191	178	201	245	2.5	2.0	2.2	2.6
Catholic	1,612	1,723	1,814	1,992	20.8	19.8	20.0	21.1
Churches of Christ	231	292	276	298	3.0	3.4	3.1	3.2
Church of England	1,603	1,803	1,894	1,984	20.6	20.8	20.9	21.0
Congregational	278	265	319	304	3.6	3.1	3.5	3.2
Lutheran	437	479	495	512	5.6	5.5	5.5	5.4
Methodist	1,844	2,090	2,258	2,357	23.7	24.1	24.9	25.0
Orthodox	208	312	259	187	2.7	3.6	2.9	2.0
Presbyterian	326	345	358	370	4.2	4.0	4.0	3.9
Salvation Army	56	56	62	51	0.7	0.6	0.7	0.5
Other denominations	111	118	139	146	1.4	1.4	1.5	1.6
Civil marriages	868	1,019	976	988	11.2	11.7	10.8	10.5
Total	7,765	8,680	9,051	9,434	100.0	100.0	100.0	100.0

6.8 DIVORCE

LEGISLATION

The Supreme Court of South Australia has had jurisdiction in divorce from 1 January 1859, the date upon which the Matrimonial Causes Act, 1858 came into operation. The present law is contained in the Commonwealth *Matrimonial Causes Act* 1959-1966 which came into operation on 1 February 1961 and which provides a uniform law throughout Australia for dissolution of marriage and other matrimonial causes and vests the Supreme Courts of the States and Territories with jurisdiction to hear and determine causes under the Act. Its transitional provisions covered matrimonial causes instituted prior to 1 February 1961, and gave petitioners the advantages of the new Act without detracting from their position under the former legislation.

The principal form of relief petitioned for and granted by the Court is dissolution of marriage (commonly known as divorce) with provision also for petitions for nullity of marriage, judicial separation, restitution of conjugal rights and jactitation of marriage.

A decree of dissolution of marriage and in some instances of nullity of marriage is in the first instance a decree *nisi*. Under the provisions of the current Act, in general a decree *nisi* automatically becomes absolute at the expiration of three months, unless rescinded by the Court, unless an appeal has been instituted or unless there are children of the marriage in respect of whom proper arrangements have not been made for welfare, advancement and education.

Grounds on which petitions for dissolution of marriage could be lodged under the 1858 Act were limited for a husband's petition to adultery and for a wife's

petition to rape, sodomy, bestiality, or adultery qualified as incestuous, with bigamy, with cruelty, or with desertion for one year and upwards.

Since this Act came into operation the following changes to the grounds on which a petition could be lodged for dissolution of marriage have been made to State legislation by enactment or amendment:

From 29 May 1919 the qualifications to the ground of adultery on the petition of a wife were removed.

From 1 March 1929 the grounds of desertion for five years, habitual drunkenness, imprisonment or frequent convictions, attempted murder, repeated assault or cruelly beating and certified mental deficiency were added.

From 20 March 1930 failure to pay maintenance during the five years prior to petition was added as a ground, habitual cruelty was substituted for repeated assault or cruelly beating and 'or inflicting or attempting to inflict grievous bodily harm' was added to the ground of attempted murder.

From 15 February 1939 the ground of five years separation pursuant to a Court order granting judicial separation or relief from cohabitation was added and the required period for desertion and failure to pay maintenance was reduced from five years to three years.

From 26 March 1942 under certain circumstances the Court was empowered to make an order of presumption of death and of dissolution of the marriage.

The grounds on which petitions can be filed for dissolution of marriage under the Commonwealth *Matrimonial Causes Act* 1959-1966 can be briefly described as: adultery; desertion for not less than two years; refusal to consummate the marriage; habitual cruelty for not less than one year; rape, sodomy or bestiality; habitual drunkenness or habitual intoxication by drugs for two years or more; frequent convictions for crime and failure to support (only on petition of wife); imprisonment for at least three years of a sentence of at least five years; conviction of attempted murder or inflicting or attempting to inflict grievous bodily harm on the petitioner; failure for at least two years to pay maintenance; failure for at least one year to comply with a decree of restitution of conjugal rights; insanity; separation for at least five years; and presumption of death.

The main effects on grounds in South Australia resulting from the Commonwealth legislation were that a petition on the ground of separation for five years no longer required a Court order granting judicial separation or relief from cohabitation as a pre-requisite, and the period for desertion to constitute a ground for dissolution of marriage was reduced from three to two years. In addition, the period of decree *nisi* is now three months, having been six months under State legislation.

Assessment of the changes in the time series tables in this section should not be made without consideration of the effects of these changes in legislation. Also, it should be noted that fluctuations from year to year in the number of decrees granted may be independent of fluctuations from year to year in the number of petitions filed.

PETITIONS LODGED

Particulars of petitions lodged during the last eleven years are shown in the following table. In each of these years petitions lodged for dissolution by wives outnumbered those lodged by husbands. This pattern has prevailed

for over fifty years, as petitions by husbands have rarely exceeded those by wives except during the two World Wars.

**Dissolution of Marriage and Other Matrimonial Causes
Petitions Filed, South Australia**

Year	Dissolution of Marriage			Nullity of Marriage	Judicial Separation	Total Petitions (a)
	By Husbands	By Wives	Total			
1957....	324	443	767	11	—	778
1958....	342	449	791	5	—	796
1959....	329	460	789	6	1	796
1960....	313	468	781	8	—	789
1961....	406	459	865	9	3	877
1962....	368	542	910	4	1	916
1963....	386	619	1,005	5	3	1,014
1964....	420	614	1,034	5	4	1,045
1965....	390	717	1,107	13	5	1,127
1966....	419	714	1,133	7	2	1,147
1967....	429	749	1,178	11	15	1,207

(a) Includes petitions lodged for dissolution or nullity: 1962, 1; 1963, 1; 1964, 2; 1965, 2; 1966, 3; 1967, 2; and petitions lodged for dissolution or judicial separation: 1966, 2; 1967, 1.

DECREES GRANTED

The following table shows the number of decrees absolute granted for dissolution and nullity of marriage and decrees granted for judicial separation. Whilst no doubt the large increase in decrees absolute granted from 1940 is partly due to the 1939 legislative changes, it also reflects the abnormal conditions experienced during the war and its immediate aftermath.

**Dissolution of Marriage and Other Matrimonial Causes
Decrees Absolute Granted, South Australia**

Period	Dissolution of Marriage			Nullity of Marriage	Judicial Separation
	To Husbands	To Wives	Total		
Annual Average					
1916-20	14.8	7.8	22.6	0.2	0.6
1921-25	37.2	45.2	82.4	0.8	0.6
1926-30	48.0	58.6	106.6	0.6	0.4
1931-35	73.0	93.8	166.8	0.6	0.8
1936-40	105.0	137.4	242.4	1.4	1.8
1941-45	216.2	215.2	431.4	1.2	1.4
1946-50	317.0	329.0	646.0	3.6	1.6
1951-55	262.8	350.0	612.8	4.6	1.2
1956-60	244.2	294.2	538.4	7.6	1.6
1961-65	334.6	446.8	781.4	4.6	0.6
Year					
1963.....	339	426	765	5	—
1964.....	(a) 358	(a) 530	887	3	—
1965.....	(a) 355	(a) 498	852	3	—
1966.....	407	662	1,069	9	2
1967.....	360	569	929	9	3

(a) Includes one granted to both husband and wife.

A petition can be lodged and a decree granted on more than one ground and for 1961 and subsequent years these combinations have been recorded separately. Prior to 1961 one of the grounds was selected for classification, *e.g.* 'adultery and desertion' was classified as 'adultery', and for the purpose of comparison the figures for the years 1961 and later have been similarly treated in the next table, which relates to grounds on which decrees absolute have been granted for dissolution of marriage. The number of decrees granted for dissolution on more than one ground were: 1962, 10; 1963, 37; 1964, 71; 1965, 28; 1966, 9.

Dissolution of Marriage: Grounds of Decrees Absolute, South Australia

Period	Grounds on which Granted						Total
	Adultery	Cruelty	Desertion	Drunkenness	Separation	Other	
HUSBAND AS PETITIONER							
Annual Average							
1933-35 ..	45.3	—	27.3	0.3	—	2.7	75.6
1936-40 ..	62.2	—	40.8	0.8	0.2	1.0	105.0
1941-45 ..	131.2	0.8	77.6	1.0	2.8	2.8	216.2
1946-50 ..	179.6	1.6	127.0	1.4	1.6	5.8	317.0
1951-55 ..	131.2	5.0	120.4	0.6	1.8	3.8	262.8
1956-60 ..	133.4	4.0	103.2	0.4	1.4	1.8	244.2
1961-65 ..	127.2	3.4	146.9	0.8	54.2	2.1	334.6
Year							
1962.....	(a) 110	1	141	—	60	3	(a) 315
1963.....	124	2	152	1	58	2	339
1964.....	(a) 146	3	128	2	76	3	(a) 358
1965.....	126	6	(a) 160	—	63	—	(a) 355
1966.....	168	4	146	2	83	4	407
WIFE AS PETITIONER							
Annual Average							
1933-35 ..	60.0	3.0	31.0	2.3	—	15.3	111.6
1936-40 ..	65.4	9.2	47.0	3.4	0.4	12.0	137.4
1941-45 ..	95.0	17.8	79.6	4.6	6.6	11.6	215.2
1946-50 ..	148.4	40.2	125.4	4.4	3.8	6.8	329.0
1951-55 ..	100.4	93.6	136.6	7.8	6.4	5.2	350.0
1956-60 ..	76.6	93.8	106.8	7.0	4.4	5.6	294.2
1961-65 ..	95.0	98.0	157.9	6.8	80.8	8.3	446.8
Year							
1962.....	(a) 69	60	165	3	70	4	(a) 371
1963.....	85	86	138	6	104	7	426
1964.....	(a) 112	109	184	11	104	10	(a) 530
1965.....	96	100	(a) 165	9	117	11	(a) 498
1966.....	145	133	219	30	130	5	662

(a) Includes one granted to both husband and wife.

Details for grounds were not recorded until 1933, but in all years prior to 1929 adultery was virtually the only ground upon which a divorce could be granted.

Legislative changes do not have an immediate effect on statistics of decrees absolute, and this should be taken into account when comparing figures for recent years in the preceding table. For instance, 639 of the 718 decrees absolute granted in 1961 were on petitions lodged under the superseded State legislation. Since then there has been a steady decline and by 1966 the number granted on petitions filed under the old legislation had become insignificant.

The ages at marriage of persons divorced are shown in the following table.

**Dissolution of Marriage: Decrees Absolute, Age at Time of Marriage
South Australia**

Year	Age at Marriage							Total	
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and Over		Not Stated
HUSBANDS									
1962....	38	285	197	68	45	21	18	13	685
1963....	38	352	187	89	43	23	28	5	765
1964....	53	399	245	100	45	20	19	6	887
1965....	54	418	212	73	46	20	26	3	852
1966....	86	516	265	103	47	24	26	2	1,069
WIVES									
1962....	193	284	95	50	19	16	14	14	685
1963....	218	322	115	42	31	18	14	5	765
1964....	245	392	139	52	27	9	17	6	887
1965....	275	380	88	47	34	12	14	2	852
1966....	369	437	135	56	32	20	19	1	1,069

Information of the relative ages at marriage of husbands and wives for marriages dissolved in 1966 is contained in the following table.

Dissolution of Marriage: Decrees Absolute, 1966

Relative Ages at Marriage of Husbands and Wives, South Australia

Age of Husbands at Marriage	Age of Wives at Marriage							Total Husbands
	Under 20	20-24	25-29	30-34	35-39	40 and Over	Not Stated	
Under 20	71	14	1	—	—	—	—	86
20-24	229	248	33	4	1	1	—	516
25-29	54	131	64	12	2	2	—	265
30-34	11	34	21	20	12	5	—	103
35-39	3	9	8	9	8	10	—	47
40 and over	1	1	8	10	9	21	—	50
Not stated	—	—	—	1	—	—	1	2
Total wives ..	369	437	135	56	32	39	1	1,069

The following table shows the duration of marriage, *i.e.* the interval between marriage and the date the decree was made absolute, for marriages dissolved in 1946 (the first year so tabulated) and during the last five years.

**Dissolution of Marriage: Decrees Absolute, Duration of Marriage
South Australia**

Year	Duration of Marriage (Years)								Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	
1946....	167	197	119	74	48	28	16	5	654
1962....	45	167	172	129	81	47	23	7	685
1963....	43	202	172	166	90	58	12	10	765
1964....	61	207	183	185	122	70	32	16	887
1965....	64	222	186	154	114	59	30	14	852
1966....	83	282	222	182	137	88	41	17	1,069

Of the marriages dissolved in 1966, 7.8 per cent were under five years duration and 34.1 per cent were under ten years duration. The corresponding proportions in 1946, when these particulars were first tabulated, were 25 per cent and 55 per cent. The comparatively early 'break-up' of marriages which were dissolved in

1946 partly can be attributed to the abnormal war-time conditions: in each of the next three years the proportion of divorces for marriages of less than ten years duration was 49 per cent, higher than in any year since.

The lower proportions in recent years, particularly in the first three years under Commonwealth legislation, probably are at least partly due to the steep increase in the number of decrees absolute granted on the ground of separation for five years. Prior to the commencement of operation of Commonwealth legislation, a petition for dissolution on the ground of separation required a Court order issued at least five years previously. As the result of the removal of this restriction some of the subsequent petitions on this ground almost certainly came from persons who previously had no ground on which to petition, and probably many of them were in the higher marriage duration group. The effect was a rise in the proportion of dissolved marriages of ten years duration or more from 61.1 per cent in 1960 to 77.7 per cent in 1963; since then this proportion has fallen to 65.9 per cent in 1966.

The same trend is evident in the following table on age at time of decree absolute which shows that in 1946 nearly 52 per cent of husbands and over 64 per cent of wives were under thirty-five years of age at the time of dissolution but in 1966 the corresponding proportions were 32.5 per cent of husbands and 43.7 per cent of wives.

**Dissolution of Marriage: Age at Time of Decree Absolute
South Australia**

Year	Age at Time of Decree Absolute							Total	
	Under 25	25-29	30-34	35-39	40-44	45-49	50 and Over		Not Stated
HUSBANDS									
1946....	47	124	168	116	94	51	54	—	654
1962....	8	71	103	142	105	94	149	13	685
1963....	12	80	127	148	137	95	161	5	765
1964....	20	91	148	157	137	136	192	6	887
1965....	20	111	136	154	141	113	174	3	852
1966....	38	142	167	196	169	125	230	2	1,069
WIVES									
1946....	122	149	149	103	53	46	32	—	654
1962....	48	98	124	125	93	79	104	14	685
1963....	48	123	124	139	131	101	94	5	765
1964....	70	133	133	159	145	110	131	6	887
1965....	71	154	137	148	126	98	116	2	852
1966....	108	191	170	172	145	121	161	1	1,069

For marriages dissolved in 1966 the following table shows the relative ages of husbands and wives at the time of dissolution.

Dissolution of Marriage: Decrees Absolute, 1966

Relative Ages of Husbands and Wives at Time of Dissolution, South Australia

Age of Husbands at Dissolution	Age of Wives at Dissolution							Total Husbands
	Under 25	25-29	30-34	35-39	40-44	45 and Over	Not Stated	
Under 25	36	2	—	—	—	—	—	38
25-29	60	77	4	—	—	1	—	142
30-34	8	80	64	12	1	2	—	167
35-39	3	23	81	70	15	4	—	196
40-44	—	7	15	72	61	14	—	169
45 and over	1	2	6	18	67	261	—	355
Not stated	—	—	—	—	1	—	1	2
Total wives ...	108	191	170	172	145	282	1	1,069

The following table shows particulars of the number of children of marriages dissolved in 1946 and in the last five years.

**Dissolution of Marriage: Decrees Absolute, Children of the Marriage
South Australia**

Year	Number of Children at Time of Petition							Total Dissolutions of Marriage	Total Children
	0	1	2	3	4	5	6 and Over		
1946.....	319	158	117	38	14	6	2	654	604
1962.....	236	194	140	60	40	11	4	685	893
1963.....	243	199	166	94	51	6	6	765	1,085
1964.....	260	227	205	118	48	21	8	887	1,340
1965.....	253	198	210	109	52	19	11	852	1,333
1966.....	333	247	259	139	51	22	18	1,069	1,618

Information collected for petitions filed under State legislation covered only living 'issue' under sixteen years of age; information collected for petitions filed under Commonwealth legislation covers living 'children of the marriage' under twenty-one years of age, which, as defined in the Act, includes also adopted children, children of the husband and wife born before marriage and children of either the husband or the wife if members of the household. As the numbers of orders absolute for dissolution granted in 1962 to 1966 combine those granted under both the old and the new legislation, the information on children for each of these years is not strictly comparable with that of each previous year, although this lack of uniformity is becoming increasingly insignificant (see comment after the table on 'grounds' on page 237).

The following table shows the number of children of marriages related to duration of marriage for decrees absolute for dissolution granted in 1966.

**Dissolution of Marriage: Decrees Absolute, 1966
Duration of Marriage and Children of the Marriage, South Australia**

Duration of Marriage (Years)	Number of Children at Time of Petition							Total Dissolutions of Marriage	Total Children
	0	1	2	3	4	5	6 and Over		
Under 5	44	26	11	1	1	—	—	83	55
5-9	80	92	75	22	9	4	—	282	364
10-14	60	44	52	45	12	6	3	222	379
15-19	32	25	55	36	17	9	8	182	413
20-24	30	21	42	26	9	2	7	137	276
25-29	34	27	17	7	3	—	—	88	94
30-34	22	10	6	2	—	1	—	41	33
35-39	15	1	1	—	—	—	—	17	3
40 and over	16	1	—	—	—	—	—	17	1
Total dissolutions of marriage	333	247	259	139	51	22	18	1,069	—
Total children ...	—	247	518	417	204	110	122	—	1,618

PART 7

LABOUR

7.1 EMPLOYMENT

THE WORK FORCE

Particulars of the number of persons constituting the work force in South Australia are available from periodic population censuses. At the 1966 Census, certain additional questions were asked in order to permit estimation of the size of the work force in accordance with the recommendations of the Eighth International Conference of Labour Statisticians. The principal effect of this new approach was to include approximately 14,600 additional persons in the work force. The major factor in this change was females working part-time, some of whom did not previously consider themselves as 'engaged in an industry, business, profession, trade or service'.

More detailed definitions of the work force and of the new questions asked at the 1966 Census are available in Census Bulletin 4.1.

In the following table persons in the work force at the 1961 and 1966 Censuses are classified by occupational status.

The growth in the female proportion of the work force from 1954 to 1961 has continued so that by the 1966 Census females made up 29.0 per cent of the work force compared with 23.6 per cent in 1961. Similarly, the proportion of the female population in the work force rose from 18.6 per cent in 1961 to 23.4 per cent in 1966.

Occupational Status of the Population, South Australia
Censuses 1961 and 1966

Occupational Status	30 June 1961			30 June 1966		
	Males	Females	Persons	Males	Females	Persons
In work force						
Employer	20,132	4,081	24,213	23,747	6,228	29,975
Self-employed ...	35,128	5,850	40,978	31,135	7,205	38,340
Employee	223,241	75,447	298,688	259,105	111,197	370,302
Helper	1,318	634	1,952	1,167	2,613	3,780
Not at work	8,520	3,210	11,730	(a)	(a)	(a)
Unemployed	(a)	(a)	(a)	4,464	3,563	8,027
Total work force	288,339	89,222	377,561	319,618	130,806	450,424
Not in work force....	201,886	389,893	591,779	228,912	412,539	641,451
Total population.	490,225	479,115	969,340	548,530	543,345	1,091,875

(a) Definitional and conceptual differences prevent derivation of figures for both Censuses.

The working population may be classified according to two distinct concepts, the *occupation* which is personal to the individual, and the *industry* in which the individual carries on his occupation.

In the following table the work force at the 1966 Census is classified by occupation, *i.e.* the kind of work a person normally performs.

Work Force: Occupation, South Australia, 30 June 1966

Occupation Group	Males		Females		Persons	
	Number	Proportion of Total	Number	Proportion of Total	Number	Proportion of Total
		%		%		%
Professional, technical and related workers	23,834	7.46	18,652	14.26	42,486	9.43
Administrative, executive and managerial workers	24,280	7.60	3,094	2.36	27,374	6.08
Clerical workers	25,423	7.95	36,000	27.52	61,423	13.64
Sales workers	17,374	5.44	19,161	14.65	36,535	8.11
Farmers, fishermen, hunters, timber-getters and related workers	40,723	12.74	8,420	6.44	49,143	10.91
Miners, quarrymen and related workers	1,741	0.55	26	0.02	1,767	0.39
Workers in transport and communication occupations	23,274	7.28	3,046	2.33	26,320	5.84
Craftsmen, production-process workers and labourers (n.e.i.) ...	145,427	45.50	15,802	12.08	161,229	35.79
Service, sport and recreation workers	11,611	3.63	21,986	16.81	33,597	7.46
Members of armed services, enlisted personnel	3,432	1.07	168	0.13	3,600	0.80
Occupation inadequately described or not stated	2,499	0.78	4,451	3.40	6,950	1.54
Total work force	319,618	100.00	130,806	100.00	450,424	100.00

In the next table the numbers of males and females in the work force at the 1966 Census are classified according to industry in conjunction with occupational status. The proportion of the work force engaged in primary production declined from 22.2 per cent in 1933 to 17.9 per cent in 1947 and to 10.6 per cent in 1966. In contrast, the percentage recorded as employed in manufacturing industries rose from 15.5 in 1933 to 26.8 in 1947 and to 27.8 in 1966.

Work Force: Industry and Occupational Status, South Australia*Census 30 June 1966*

Industry Group	Employed					Not at Work	Total Work Force
	Employer	Self-Employed	Employee	Helper	Total		
MALES							
Primary production	8,407	16,756	12,650	809	38,622	263	38,885
Mining and quarrying	79	604	2,325	17	3,025	45	3,070
Manufacturing	2,207	1,783	96,011	73	100,074	721	100,795
Electricity, gas, water and sanitary services	14	19	10,726	6	10,765	40	10,805
Building and construction	3,137	3,965	29,084	46	36,232	687	36,919
Transport and storage	878	2,139	18,586	17	21,620	191	21,811
Communication	—	2	7,653	3	7,658	25	7,683
Finance and property	358	608	8,793	16	9,775	26	9,801
Commerce	5,355	3,492	35,609	79	44,535	326	44,861
Public authority (n.e.i.) and defence services	—	—	11,492	—	11,492	34	11,526
Community and business services (including professional)	1,807	522	17,758	46	20,133	90	20,223
Amusement, hotels and other accommodation, cafes, personal services, etc.	1,452	1,149	7,063	33	9,697	99	9,796
Other industries	—	1	2	—	3	—	3
Industry inadequately described or not stated	53	95	1,353	22	1,523	1,917	3,440
Total males in work force	23,747	31,135	259,105	1,167	315,154	4,464	319,618
FEMALES							
Primary production	1,527	3,048	2,742	1,394	8,711	59	8,770
Mining and quarrying	6	24	128	2	160	1	161
Manufacturing	450	410	22,983	102	23,945	313	24,258
Electricity, gas, water and sanitary services	2	..	553	..	555	8	563
Building and construction	291	148	996	66	1,501	14	1,515
Transport and storage	145	170	1,809	32	2,156	15	2,171
Communication .....	..	1	2,183	..	2,184	16	2,200
Finance and property	40	88	5,912	17	6,057	34	6,091
Commerce	2,290	1,957	26,373	385	31,005	339	31,344
Public authority (n.e.i.) and defence services .....	..	..	3,510	..	3,510	31	3,541
Community and business services (including professional)	307	409	29,530	109	30,355	267	30,622
Amusement, hotels and other accommodation, cafes, personal services, etc.	1,120	827	12,319	215	14,481	222	14,703
Other industries .....	..	..	1	..	1	2	3
Industry inadequately described or not stated	50	123	2,158	291	2,622	2,242	4,864
Total females in work force	6,228	7,205	111,197	2,613	127,243	3,563	130,806

Work Force Survey

In addition to the complete census counts, estimates of the civilian work force are prepared each quarter. These estimates are prepared on an Australia-wide basis and separate information is not available for South Australia. The estimates are based on the results of surveys of sample households. The first surveys were conducted in June 1960 and were restricted to the six State capital cities.

More recently the survey programme has been extended to non-metropolitan urban and rural areas which will enable estimates of the total Australian work force to be published.

Information yielded includes work force participation rates, *i.e.* the percentage of the total civilian population falling in a particular class who are members of the civilian work force. Work force participation, by age and marital status, is shown in the following table for the surveys of August 1962 and 1967.

Work Force Participation Rates, Six Australian State Capital Cities

Particulars	Age Group (Years)						Total Civilian Population 15 Years of Age and Over
	15-19	20-44		45-64		65 and Over	
		Married	Not Married (a)	Married	Not Married (a)		
				Per cent			
				MALES			
August 1962 ..	62.2	98.8	91.0	93.9	78.6	21.9	83.5
August 1967 ..	60.9	98.9	88.4	93.7	79.5	22.4	82.8
				FEMALES			
August 1962 ..	67.7	32.0	86.3	24.3	46.4	3.8	35.7
August 1967 ..	64.0	39.5	85.3	29.9	48.9	4.0	39.8

(a) Includes never married, widowed and divorced.

Surveys of School Leavers

Surveys designed to investigate some aspects of the work force attachment of school leavers were conducted on an Australia-wide basis in February in each of the years 1964 to 1967.

School leavers for these surveys are defined as Australian civilians in the age group fifteen to twenty-four years who had attended full-time at a school, university or other educational institution at some time during the previous year. The number of school leavers in the work force expressed as a percentage of total school leavers gives the work force participation rate. The rates for this State and for Australia are set out in the following table.

Work Force Attachment of School Leavers

February	South Australia			Australia		
	Total in Work Force	Total Leavers	Work Force Participation Rate	Total in Work Force	Total Leavers	Work Force Participation Rate
	'000		%	'000		%
MALES						
1964....	7.7	8.0	96.3	84.7	87.6	96.7
1965....	8.9	9.3	95.7	80.2	83.3	96.3
1966....	9.7	10.3	94.2	85.7	88.7	96.6
1967....	7.7	7.9	97.5	79.9	85.0	94.0
FEMALES						
1964....	7.9	8.6	91.9	67.6	78.2	86.4
1965....	6.7	7.3	91.8	70.2	79.6	88.2
1966....	7.6	9.1	83.5	75.3	84.8	88.8
1967....	7.9	8.9	88.8	74.6	82.4	90.5
PERSONS						
1964....	15.6	16.6	94.0	152.4	165.8	91.9
1965....	15.5	16.6	93.4	150.4	162.9	92.3
1966....	17.3	19.4	89.2	161.0	173.5	92.8
1967....	15.7	16.8	93.5	154.5	167.4	92.2

Further details of age distribution, industry and occupation of school leavers and time of leaving school are published in Statistical Publication 6.9, *Survey of Leavers From Schools, Universities or Other Educational Institutions*.

Multiple Job Holding

The nature and extent of multiple job-holding throughout Australia was examined in surveys conducted in November 1965 and August 1966. The November 1965 survey was of an exploratory nature, being the first of its kind undertaken, and resulting information is not strictly comparable with the later survey although conceptual differences are minor.

Multiple job-holders comprise those persons who were employed in at least one of their jobs as a wage or salary earner during the survey, those persons who were described as employers or self-employed in two businesses being excluded.

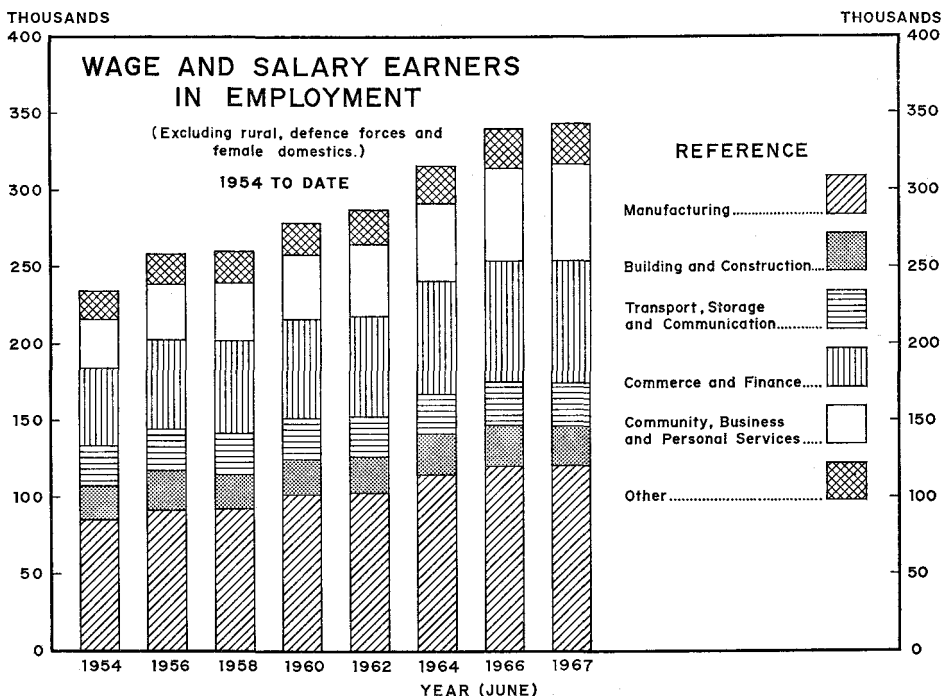
Details of surveys of Multiple Job Holding were shown on page 242 of *South Australian Year Book 1967*.

WAGE AND SALARY EARNERS IN EMPLOYMENT

Details of the number of wage and salary earners in civilian employment other than at census dates are available from periodic estimates. These estimates, which exclude employees in rural industry and private domestic service, are based on information obtained at the 1954 and 1961 Censuses, with adjustments being made from certain current information.

The figures relate to wage and salary earners on payrolls or in employment in the latter part of June as distinct from numbers of employees actually working on a specific date. They include some persons working part-time.

An industry distribution of wage and salary earners derived from these estimates, and beginning with the census year 1954, is presented in the following bar chart.



Estimated employment for June in the years 1963 to 1967 classified by industry group, is given in the following table. 'Manufacturing' includes employees of manufacturing enterprises who are not directly associated with the productive process, such as sales and distribution personnel. The category 'community, business and personal services' covers employees in education, health, amusement, hotels and restaurants, and professional and personal services but excludes female private domestics.

Wage and Salary Earners in Employment^(a), South Australia

June	Manufac- turing	Building and Con- struction	Transport, Storage, and Communi- cation	Commerce and Finance	Community, Business and Personal Services	Other	Total Employ- ment
MALES ('000)							
1963.....	89.7	24.1	23.2	42.6	19.8	20.2	219.6
1964.....	94.5	25.5	23.5	44.4	20.8	20.7	229.4
1965.....	99.3	26.6	24.2	46.6	22.1	21.1	239.9
1966.....	98.4	25.9	24.8	47.8	23.4	21.9	242.1
1967.....	99.0	25.0	24.7	48.0	24.3	22.3	243.2
FEMALES ('000)							
1963.....	18.4	0.3	3.0	26.1	29.9	3.2	80.9
1964.....	20.0	0.3	3.2	27.4	31.9	3.2	86.0
1965.....	21.9	0.4	3.4	29.8	34.2	3.7	93.4
1966.....	22.2	0.5	3.5	30.9	36.7	3.8	97.7
1967.....	22.1	0.5	3.7	31.5	38.0	3.9	99.7
PERSONS ('000)							
1963.....	108.1	24.4	26.2	68.7	49.7	23.4	300.5
1964.....	114.7	25.8	26.7	71.8	52.7	23.9	315.5
1965.....	121.2	27.0	27.6	76.4	56.3	24.8	333.3
1966.....	120.7	26.3	28.4	78.7	60.1	25.7	339.8
1967.....	121.1	25.6	28.3	79.5	62.2	26.3	342.9

(a) Excludes employees in rural industry, female private domestics, and defence forces.

Government and semi-government departments or authorities employ over 25 per cent of total civilian wage and salary earners. The following table shows the distribution of wage and salary earners at June 1966 and June 1967 by type of employer.

Wage and Salary Earners in Employment^(a): Class of Employer South Australia

Class of Employer	June 1966			June 1967		
	Males	Females	Persons	Males	Females	Persons
Private	170.5	74.9	245.4	170.1	76.7	246.8
Government (b)						
Commonwealth ..	21.5	5.1	26.6	22.3	5.2	27.5
State	45.9	17.1	63.0	46.3	17.2	63.5
Local	4.4	0.5	4.9	4.5	0.5	5.0
Total government	71.8	22.7	94.5	73.1	23.0	96.1
Total employment	242.3	97.6	339.8	243.2	99.7	342.9

(a) Excludes employees in rural industry, female private domestics, and defence forces.

(b) Includes semi-government bodies.

Further information on employment in specific sectors such as factories, rural industries, the building industry, etc. is found in the relevant sections.

UNEMPLOYMENT

At the 1966 Census the definition of 'unemployed' was taken from the Eighth International Conference of Labour Statisticians. The new concept includes as unemployed those who, in the week prior to the Census, were actively looking for work and those who had been temporarily laid off by their employer without pay for the whole of that week. The term 'not at work' used in the 1947, 1954 and 1961 Censuses, therefore, is not comparable with the 1966 approach. The count of persons unemployed in South Australia at the 1966 Census was 4,464 males and 3,563 females.

Monthly figures compiled by the Department of Labour and National Service from the operations of the Commonwealth Employment Service provide indicators of movement in the level of unemployment. The department makes a count of the number of persons, registered with the Employment Service for employment on the Friday nearest the end of the month, who claimed at the time of registering that they were not employed, and who were still recorded as unplaced. Included are persons who have been referred to employers and those who may have obtained employment without notifying the department. Also available is the number of vacancies, registered by employers, which were recorded as unfilled at the end of the month.

In the table below the number of persons and vacancies registered at the end of each month are shown for the years 1962 to 1967.

Registration with Commonwealth Employment Service, South Australia^(a)

Month	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Year:	PERSONS REGISTERED FOR EMPLOYMENT (b) ('000)											
1962.....	10.3	8.1	7.2	7.4	6.9	6.9	6.7	6.1	5.4	5.0	4.9	6.5
1963.....	7.4	6.6	6.0	6.0	6.5	6.5	6.3	5.2	4.7	4.6	3.9	5.4
1964.....	6.5	5.3	4.5	4.5	4.4	4.3	4.2	3.5	3.1	5.7	2.9	4.8
1965.....	5.5	4.6	3.4	3.3	3.4	3.5	3.6	3.4	3.4	3.6	3.7	6.1
1966.....	7.6	6.8	6.5	6.0	6.7	7.4	7.2	7.3	7.1	6.7	6.5	8.5
1967.....	10.7	9.3	7.9	8.2	8.4	8.5	8.5	8.0	6.9	6.1	6.2	10.3
	VACANCIES REGISTERED ('000)											
1962.....	1.3	1.5	1.5	1.5	1.5	1.5	1.5	2.1	2.2	2.4	2.5	2.6
1963.....	2.6	2.5	2.4	2.1	2.0	2.0	2.0	2.5	2.7	3.4	3.9	4.0
1964.....	4.0	4.3	4.2	3.9	3.7	3.4	3.3	3.9	4.7	5.3	6.0	6.0
1965.....	5.8	5.7	5.0	4.6	4.1	4.4	4.0	3.8	4.4	4.5	4.5	4.7
1966.....	3.6	3.1	2.4	2.1	1.9	1.5	1.6	1.7	2.5	2.9	3.3	3.4
1967.....	2.9	2.5	1.7	1.7	1.6	1.3	1.4	1.7	1.9	2.2	2.1	3.7
	EXCESS OF PERSONS OVER VACANCIES ('000)											
1962.....	8.9	6.7	5.7	5.9	5.4	5.4	5.2	4.0	3.2	2.6	2.3	3.8
1963.....	4.8	4.1	3.7	3.9	4.6	4.5	4.3	2.8	2.0	1.2	0.0	1.4
1964.....	2.5	1.0	0.3	0.6	0.8	0.9	0.9	-0.4	-1.6	0.4	-3.1	-1.2
1965.....	-0.3	-1.1	-1.6	-1.3	-0.7	-0.8	-0.4	-0.4	-0.9	-0.9	-0.7	1.5
1966.....	4.0	3.7	4.0	4.0	4.9	5.9	5.6	5.7	4.6	3.8	3.2	5.0
1967.....	7.8	6.9	6.2	6.6	6.2	7.1	7.1	6.4	5.1	3.9	4.2	6.6

(a) Includes Northern Territory. (b) Persons who claimed they were unemployed.

One of the primary functions of the Work Force Survey (see page 243) is to provide regular and detailed information on unemployment in Australia. Separate details for South Australia are not available and published estimates to date have been restricted to the six State capital cities.

In the table below unemployment rates are shown by industry group for the six capitals from 1962 to 1967. The unemployment rate is that percentage of the civilian work force aged fifteen years and over (fourteen years and over prior to 1966) who are currently unemployed and looking for work or who are laid off without pay.

Unemployment Rates^(a), Six Australian State Capital Cities

Industry Group in which Last Employed	August					
	1962	1963	1964	1965	1966	1967
	Per cent					
Manufacturing.....	1.7	1.6	0.9	1.1	1.4	1.4
Building and construction	2.2	1.8	0.8	0.8	1.4	2.1
Transport, storage and communication	0.8	1.0	0.9	0.8	1.1	0.9
Commerce	1.4	1.4	0.9	1.2	1.5	1.4
Public authority (n.e.i.), community and business services (including professional)	0.8	1.1	0.6	0.6	1.0	1.1
Amusements, hotels and other accommodation, cafes, personal services, etc.	2.4	1.6	1.6	1.8	1.6	1.3
Other industries.....	1.5	1.5	0.6	0.7	1.1	1.2
All industries combined.....	1.5	1.4	0.9	1.0	1.3	1.3

(a) Excludes unemployed persons who had not previously been employed.

Of the persons found to be unemployed in August 1967, 54.7 per cent had been unemployed for less than one month and 21.2 per cent had been unemployed for at least three months; this latter figure contrasted with 20.3 per cent in August 1966, 12.5 per cent in August 1965 and 24.4 per cent in August 1964.

In the following table unemployment rates are shown according to age and marital status.

Unemployment Rates^(a), Six Australian State Capital Cities

August	Age Group (Years)						Total Civilian Population 15 Years of Age and Over
	15-19	20-44		45-64		65 and Over	
		Married	Not Married (b)	Married	Not Married (b)		
	Per cent						
	MALES						
1963.....	2.0	0.6	2.0	1.0	4.6	1.5	1.3
1964.....	1.4	0.4	1.2	0.3	1.7	1.3	0.7
1965.....	1.8	0.7	0.9	0.7	1.4	2.1	0.9
1966.....	2.6	0.8	1.6	0.8	2.7	1.2	1.2
1967.....	3.0	0.7	2.1	0.8	2.3	1.2	1.2
	FEMALES						
1963.....	3.0	2.5	1.6	1.1	1.6	2.4	2.1
1964.....	1.5	2.3	0.9	1.0	0.7	1.0	1.5
1965.....	1.8	2.2	0.8	1.2	0.4	1.1	1.5
1966.....	2.5	2.3	1.6	1.4	1.3	1.9	2.0
1967.....	2.4	2.1	1.1	1.5	1.1	1.9	1.8

(a) Includes unemployed persons who had not previously been employed.

(b) Includes never married, widowed, and divorced.

EMPLOYMENT SERVICES

Prior to 1946 the South Australian Government Labour Exchange was responsible for assisting persons seeking employment and employers seeking labour. In addition the Exchange acted as the employer of State Government labour. The central office of the Exchange was in Adelaide, with a branch office at Port Adelaide, and with police stations acting as local agents elsewhere.

The Commonwealth Employment Service commenced operations in South Australia in May 1946, superseding the State Exchange. The main functions of the Employment Service are to assist people seeking employment to obtain positions best suited to their training, experience, abilities and qualifications; and to assist employers seeking labour to obtain employees best suited to the demands of the employers' particular class of work.

Specialised facilities are provided for young people, persons with physical and mental handicaps, ex-members of the defence forces, migrants, rural workers, and persons with professional and technical qualifications. Vocational guidance is provided without charge by a staff of qualified psychologists. It is available to any person, but is provided particularly for young people and handicapped persons.

The Commonwealth Employment Service is responsible for placing in employment migrant workers sponsored by the Commonwealth under the Commonwealth Nomination and similar schemes. This includes arranging for them to move to their initial employment and for their admission, if necessary, to Commonwealth migrant hostels. Experts for overseas service under technical aid programmes are recruited by the Employment Service.

Persons seeking unemployment benefit must register with the Employment Service, which is responsible for certifying that suitable employment is not available before benefits can be paid.

In association with placement activities, regular surveys of the labour market are carried out, and information supplied to interested parties.

The Department of Labour and National Service operates seven Commonwealth Employment Service offices in the metropolitan area including one at Elizabeth, and has offices at Gawler, Mount Gambier, Port Augusta, Port Lincoln, Port Pirie, and Renmark. A part-time office is maintained at Whyalla, and agents of the Employment Service are located in other centres. The South Australian Regional Office of the Department of Labour and National Service is also responsible for district offices at Alice Springs and Darwin in the Northern Territory. A Professional Employment Office in Adelaide specialises in placement of the more highly qualified and professional applicants.

There are also a number of private employment agencies, all of which are required to register with the State Department of Labour and Industry. During 1966 amendments were made to the Employees Registry Offices Act resulting in the definition of private employment agencies being broadened to include a larger range of higher level, professional and executive appointments. At 31 December 1967 there were twenty-seven agencies registered.

7.2 ARBITRATION AND INDUSTRIAL ORGANISATIONS

INDUSTRIAL ARBITRATION

In Australia a unique system of conciliation and arbitration by Government-established tribunals has been developed, with the Commonwealth Parliament and the State Parliaments each passing its own industrial legislation.

Under Section 51 of the Commonwealth Constitution the Commonwealth Parliament may make laws in relation to 'conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State'. In addition the Commonwealth may legislate under certain industrial powers for the stevedoring and maritime industries, the Commonwealth Public Service, and certain Commonwealth projects.

Commonwealth arbitration binds only the parties to a dispute, and decisions need not be of general application to an industry. Employees not specifically covered by Commonwealth awards are subject to State industrial jurisdiction. Where an award or determination of a State industrial tribunal is in conflict with an award of a Commonwealth tribunal, the latter prevails.

Although constitutionally limited, Commonwealth jurisdiction has been assisted by interstate ties of industry and trade unions, and is today the predominant influence in employer-employee relations.

Commonwealth Industrial Tribunals

Under the Commonwealth *Conciliation and Arbitration Act* 1904-67, a Court of Conciliation and Arbitration was responsible for the prevention and settlement of industrial disputes extending beyond the limits of any one State. The Court consisted of a Chief Judge, six other Judges, and a number of Conciliation Commissioners.

In 1956 substantial amendments were made to the Conciliation and Arbitration Act with a view to separating the judicial and arbitral functions of the Court. Amendments provided for the establishment of the Commonwealth Industrial Court and the Commonwealth Conciliation and Arbitration Commission.

The Industrial Court performs the judicial functions of the former Arbitration Court. It interprets and enforces awards, and passes judgment on questions of law. The Court is composed of a Chief Judge and four other Judges. Jurisdiction is exercised by a single Judge when dealing with dismissal or injury of an employee on account of industrial action, interpretation of awards, questions concerning membership of an organisation, disputes between an organisation and its members, and a prescribed matter of practice or procedure. In all other cases jurisdiction is exercised by not less than two Judges. Acts and judicial proceedings of the Court are recorded, and the Court has power to punish contempt of its authority. In general, decisions of the Industrial Court are final, however, in certain matters an appeal lies to the High Court but only by leave of the High Court.

The Commonwealth Conciliation and Arbitration Commission at present comprises a President, five Deputy Presidents, a Senior Commissioner, ten Commissioners, and three Conciliators. Inquiries into basic wages, standard hours, and long service leave must be dealt with by the Commission in Presidential Session, *i.e.*, constituted by at least three presidential members. Other matters are generally dealt with by individual Commissioners who are assigned to particular industries or industry groups. A presidential member of the Commission deals with matters in the maritime and stevedoring industries. Conciliators assist in the reaching of agreement but have no power to impose compulsory arbitration.

When an industrial dispute occurs or is considered likely to occur, a Commissioner allocated to the industry takes steps for the prompt settlement of the dispute by conciliation or, if in his opinion conciliation is unlikely to succeed or has failed, by arbitration. In seeking agreement he may obtain the services of a Conciliator, and must obtain such assistance when requested by one of the parties. If agreement is reached, the terms of the agreement are recorded and

may be certified by the Commission. A certified agreement has the same effect as an award made by a Commissioner. Upon application by one of the parties, the President may, if he considers it in the public interest, direct the Commission constituted by not less than three members, one of whom shall be a presidential member, to hear the matter in dispute.

An appeal may be lodged against awards and certain decisions made by a Commissioner if in the opinion of the Commission the matter is of such importance that in the public interest an appeal should lie. Such appeals are heard by the Commission consisting of not less than three members of whom at least two are presidential members.

The Conciliation and Arbitration Act was amended in 1967 to enable the establishment of a tribunal to handle industrial disputes involving crews of civil aircraft. As a consequence the Flight Crew Officers Industrial Tribunal came into existence in November, 1967.

Conditions in the Commonwealth Public Service are normally regulated by the Public Service Arbitrator. However, where the Arbitrator refrains from hearing or determining a claim, or gives his consent to such action, a claim on behalf of Commonwealth employees may be submitted to the Commission.

State Industrial Tribunals

South Australia was a pioneer in State intervention in industrial relations. 'A Bill to Facilitate the Settlement of Industrial Disputes' was introduced in State Parliament in 1890. It was, however, four years before a modified version setting up Boards of Conciliation was enacted. An Industrial Court was established in 1912 and was later incorporated in the system of tribunals created by the Industrial Code of 1920. This Act was subsequently repealed by the Industrial Code 1967.

The Industrial Court usually consisted of a President and Deputy President, both appointed from legal practitioners of ten years standing. Normally the court was constituted by one of these officers, but certain matters were traditionally determined by a full court comprising both officers. The function of the court was to make awards concerning wages and conditions of employment for workers who were outside the jurisdiction of the industrial boards. It had authority to adjudicate in cases of strikes or lockouts and could summon persons to compulsory conferences and hear appeals from determinations of industrial boards. In making an award the court could appoint or provide for a board of reference to deal with matters covered by the award, with a right of appeal to the Court against a decision of the Board.

The Board of Industry comprised the President or Deputy President of the Industrial Court and four commissioners. The functions of the Board were to recommend the creation or dissolution of industrial boards and to determine their ambit; to adjudicate on demarcation disputes; and to fix prices of commodities under the Fair Prices Act, 1924, if some manipulative control was shown. Prior to 1950 the Board of Industry also conducted periodic enquiries to fix a State 'living wage', but subsequently the wage has been fixed by government proclamation.

Industrial Boards, consisting of a chairman and an equal number of employer and employee representatives, were set up by the Minister of Labour and Industry upon the recommendation of the Board of Industry. Each industrial board made determinations concerning wages and conditions of employment

for workers within its particular industry group. The jurisdiction of most boards was confined to the metropolitan area, however, in the case of government and local government employees, determinations generally applied to the whole State.

The Industrial Code, 1967 now provides for the Industrial Court, an Industrial Commission and Conciliation Committees.

Amendments made to the Industrial Code during 1966 established the Industrial Commission of South Australia which, in general, has the same award making powers as the Industrial Court previously had. The President of the Industrial Court became President of the Commission and in addition is the sole Judge of the Industrial Court. (The Court deals only with legal matters). In effect, the arbitral functions of the Industrial Court, which were constituted by a President and not more than two Deputy Presidents, are now exercised by the Commission as constituted by the President and two Commissioners (Full Commission) or by any one of them, as directed by the President. Although the President must be a person eligible for appointment as a Judge of the Supreme Court, the two Commissioners, who are appointed by the Governor, are not required to have legal qualifications. The Act provides that one must be experienced in industrial affairs through association with employers' interests, and the other must have similar experience by having been associated with trade union affairs.

The Industrial (or Wages) Boards which had operated since 1920, were reconstituted as Conciliation Committees with one of the Commissioners as chairman. Committees are appointed by the Minister of Labour and Industry on the recommendation of the President, for a three-year term. The Committees have the same jurisdiction in industrial matters as the Commission. If the process of conciliation before a committee fails, then the chairman sits as a Commissioner to determine the unresolved matters. The awards of the Committees operate as common rules in the industries concerned, but the awards of the Commission are binding only on the parties before the Commission unless the Commission makes an order declaring the award a common rule.

Provision is made for a Commissioner, whether dealing with a matter as Commissioner or as Chairman of a Conciliation Committee to consult with the President as to whether a matter should be dealt with by the Full Commission and he is required to so consult with the President on the application of any party to an industrial matter before him.

There is a right of appeal against awards and decisions of a Commissioner or of a Conciliation Committee. As one Commissioner is the Chairman of each Conciliation Committee a provision is included to enable the appeal to be heard by a bench of three, *viz* the President, the Commissioner not concerned in the matter which is the subject of the appeal, and the Industrial Registrar. This tribunal is described as the Commission in Appeal Session.

Power is given to the President, a Commissioner or the Industrial Registrar to hear claims for the recovery of sums due under awards or registered agreements, but there is no power to award costs against either party. Where the amount of the claim exceeds \$60 there is an appeal to the President. Judgments are enforceable in the same manner as judgments of the Local Court.

The Board of Industry was abolished in 1966, its functions (with the exception of demarcation disputes) being taken over by the Industrial Commission. Demarcation disputes are now dealt with in the same manner as an application for an award.

As the arbitration system now stands, it consists of:

- (1) the Industrial Court which deals with matters of law;
- (2) the Industrial Commission which makes awards covering workers not under the jurisdiction of conciliation committees, hears claims for the recovery of sums due under awards or agreements, deals with demarcation disputes and hears appeals from decisions of commissioners or conciliation committees;

and

- (3) Conciliation Committees, which comprise a Commissioner and equal representations of employer and employee interests, and have the same jurisdiction to make awards as the Commission except that they cannot determine annual salaries, and generally have a geographical area of operation which is restricted to the metropolitan area (except as regards government or local government employees).

Proceedings against persons or organisations breaching an award are heard in a Court of Summary Jurisdiction although where a question of law is involved the matter may be referred to the Industrial Court.

EMPLOYEE ORGANISATIONS

Early employee organisations in South Australia included the Progressive Society of Carpenters and Joiners, formed in the mid-1840s, and the Adelaide Branch of the Amalgamated Society of Engineers, founded some twenty years later in 1864. These societies were basically craft unions and it was not until 1870 that an industrial union open to all members in an industry, *viz* the Railway Service Mutual Association, was formed. Associations of waterfront employees, shop assistants, blacksmiths and saddlers emerged in 1873, and general acceptance of the eight-hour day was secured in the same year.

One of the problems facing early unions was the absence of legal recognition but in 1876 South Australia became the first State to legislate in this field. The Trade Union Act, 1876, recognised unions as lawful bodies capable of holding property.

The Adelaide Trades and Labor Council, the first delegates society, held its inaugural meeting in January 1884 and in the following year reported eleven incorporated societies. At the beginning of 1890, twenty-nine unions were recorded in South Australia. The maritime strike and other labour unrest of the early 1890s led to the establishing of a further twenty-eight known unions in the three years 1890 to 1892.

There are today over 130 separate unions operating in South Australia. Although a number of unions exist only in this State, branches of interstate or federated unions account for the majority of total membership. Some of these are bound under a system of unification with centralised control while others are practically independent and self-governing, the federal bond existing only for limited specified purposes.

The central labour organisation for the State is the United Trades and Labor Council of South Australia, and combined union councils exist for Leigh Creek, Mount Gambier, Peterborough, Port Augusta, Port Lincoln, the Upper Murray and Whyalla. These central organisations, together with individual unions are affiliated with the Australian Council of Trade Unions. All major unions are affiliated with the Council, which was founded at an All-Australian Trade Union Congress in 1927. The Trades and Labor Council is the State branch of the A.C.T.U. and has the right to appoint one representative to act on the executive of the council.

The following table gives particulars of the number of separate unions and union membership for the years 1962 to 1966. The table includes estimated percentages of trade union members to total wage and salary earners in employment. The estimates of total wage and salary earners have been calculated by adding estimates of rural and private domestic employees based on census results to estimates of wage and salary earners which normally exclude rural and private domestic employees. For this reason and because trade union membership includes some persons not in employment, the percentages shown in the table must be regarded as approximations.

Trade Unions, South Australia

At 31 December

Year	Separate Unions	Members			Proportion of Members to Total Wage and Salary Earners		
		Males	Females	Persons	Males	Females	Persons
	No.	'000	'000	'000	%	%	%
1962.....	133	136.5	23.9	160.4	61	29	52
1963.....	134	136.6	24.5	161.1	58	28	50
1964.....	137	141.4	25.5	166.9	58	27	50
1965.....	137	146.7	27.3	174.0	58	28	50
1966.....	136	149.9	28.6	178.5	59	28	50

In the next table unions and membership have been classified under broad industrial groupings. Where the members of a union are employed in a number of industries they have been classified to the predominant industry. The classification 'other' includes rural industry, mining and quarrying, banking, insurance and clerical, wholesale and retail trade, amusement, hotels and community and business services.

Trade Unions: Industry Groups, South Australia

At 31 December

Year	Manu- facturing	Building and Con- struction	Transport	Public Authority (n.e.i.)	Other	Total
NUMBER OF SEPARATE UNIONS						
1962....	41	7	19	36	30	133
1963....	41	7	18	37	31	134
1964....	42	7	20	38	30	137
1965....	42	7	20	37	31	137
1966....	41	6	20	37	32	136
NUMBER OF MEMBERS ('000)						
1962....	54.6	12.3	19.4	37.8	36.3	160.4
1963....	59.9	10.7	19.0	35.7	35.8	161.1
1964....	60.8	11.7	18.9	37.4	38.1	166.9
1965....	63.1	11.6	19.3	40.9	38.9	174.0
1966....	65.6	11.0	19.5	41.7	40.7	178.5

EMPLOYER ORGANISATIONS

The oldest employer organisation in South Australia is the Adelaide Chamber of Commerce, founded in 1839. The activities of the Chamber of Commerce, and of other employer associations, however, enter many fields not directly related to industrial issues.

From the point of view of industrial matters, the South Australian Employers' Federation Inc., founded in 1889, and the South Australian Chamber of Manufactures, established twenty years earlier in 1869, are the dominant organisations. These two organisations provide industrial services for the majority of South Australian employers and employer groups.

The Employers' Federation is an incorporated body being largely a federation of employer associations, although provision is made for individual membership. In 1967 there were thirty-six affiliated associations encompassing some 7,000 employers, and approximately 1,000 individual members. The federation is maintained by fees paid by members, together with charges made for industrial actions, and from secretarial charges from member associations for which the federation acts as secretariat. A council, which contains a representative from each of the member associations, is elected annually, and an executive is elected by the council. Services provided include the negotiating and drafting of industrial agreements, and the preparation and presentation of cases before Commonwealth and State industrial tribunals. Advice is provided on existing awards and determinations, and on various aspects of industrial legislation.

The Chamber of Manufactures, formed originally to promote the products of South Australia, established an industrial department in 1940-41, and has since accepted increasing responsibility for representing employers' interests in the fixing of wages and the determination of employment conditions, both in State and Commonwealth jurisdictions.

The chamber has over 3,000 members organised, where possible, into more than fifty trade sections. Administration is by a council of some 130 members representative of industry groups and trade sections, which in turn elects an executive of six members. In addition to industrial matters, the chamber secretariat draws attention to proposals before the State and Commonwealth Parliaments, proposals of local government authorities, matters before the Tariff Board, and regulations of government departments and instrumentalities which could or do affect member companies.

INDUSTRIAL DISPUTES

Details of the number and extent of industrial disputes occurring in South Australia are shown in the next table. Effects on other establishments because of lack of materials, disruption of transport services, power cuts, etc. are not included in these statistics.

Particulars of all disputes in progress during the year are included in the annual figures. Consequently, details of the number of disputes and of workers involved in the disputes which commenced in any year, and were still in progress during the following year, are included in the figures for both years. Working days and wages lost are included in the appropriate year. Workers involved in more than one dispute during the year are counted once for each dispute.

Industrial Disputes^(a), South Australia

Period	Disputes	Workers Involved			Working Days Lost	Estimated Loss in Wages
		Directly	Indirectly (b)	Total		
						\$'000
Annual Averages						
1951-55	30	17,376	402	17,778	50,472	310.0
1956-60	24	12,820	16	12,836	22,352	157.4
1961-65	39	18,374	172	18,546	25,995	234.6
Year						
1962.....	31	11,748	100	11,848	14,599	118.8
1963.....	35	11,938	107	12,045	8,957	81.9
1964.....	55	22,851	189	23,040	62,785	585.2
1965.....	48	28,323	143	28,466	26,379	253.3
1966.....	42	8,697	63	8,760	20,903	199.7

(a) Disputes involving a stoppage of work of ten man-days or more.

(b) Persons thrown out of work at the establishment where the stoppages occurred but not themselves parties to the dispute.

In the following table industrial disputes occurring during 1965 and 1966 are classified by industry groups. A dispute involving workers in more than one industry group is counted once only and is included in the industry group which has the largest number of workers involved. Other details are allocated to their respective industry groups.

Industrial Disputes^(a): Industry Groups, South Australia

Industry Group	1965				1966			
	Disputes	Workers Involved (b)	Working Days Lost	Estimated Loss in Wages	Disputes	Workers Involved (b)	Working Days Lost	Estimated Loss in Wages
				\$'000				\$'000
Engineering metals, vehicles, etc.	17	7,275	8,836	72.6	16	2,689	5,980	62.2
Food, drink and tobacco	—	—	—	—	1	200	400	3.6
Paper, Printing etc.	—	—	—	—	1	48	24	0.2
Other manufacturing	2	224	710	8.7	3	950	11,717	105.5
Building and construction	7	5,067	3,254	33.4	10	1,961	1,285	12.7
Railway and tramway services.	3	2,270	2,186	26.1	1	36	12	0.1
Road and air transport	2	206	497	4.9	2	28	71	0.8
Stevedoring	15	12,787	8,994	91.9	5	2,330	931	10.1
Other Industries (c)	2	637	1,902	15.6	3	518	483	4.4
Total	48	28,466	26,379	253.3	42	8,760	20,903	199.7

(a) Disputes involving a stoppage of work of ten man-days or more.

(b) Includes workers indirectly involved.

(c) Includes Communication ; Finance and Property ; Wholesale and Retail Trade ; Public Authority (n.e.i.) and Community and Business Services.

7.3 WAGES AND HOURS

WAGES

Prior to the National Wage Cases of 1967, wages as determined by Commonwealth and State industrial authorities consisted of two distinct elements; a basic or living wage to which was added margins and loadings reflecting various features of employee activity. For a more detailed description of these elements see *South Australian Year Book* 1967, pages 253 and 257-8.

The Total Wage concept was accepted by the decision of the Conciliation and Arbitration Commission in June 1967. The application of this concept, referred to on page 260, should limit to one the number of national wage cases in any year and provides the Commission with a flexible basis for future decisions.

Commonwealth Wages Fixation

The *Conciliation and Arbitration Act* 1904-1967 gives the Conciliation and Arbitration Commission power to make an award or to certify an agreement 'altering the basic wage for adult males (or females) (that is to say, that wage, or that part of a wage, which is just and reasonable for an adult male [or female], without regard to any circumstance pertaining to the work upon which, or the industry in which, he is employed) or the principles upon which it is computed'. The Commission holds wage inquiries from time to time with its findings applicable to industrial awards within its jurisdiction.

Although the basic wage was originally interpreted as the minimum wage necessary to maintain an employee and his family, it is now generally accepted 'that the wage should be fixed at the highest amount which the economy can sustain and that the "dominant factor" is the capacity of the community to carry the resultant wage levels'⁽¹⁾.

The first basic wage judgment was given in 1907. The rate declared, in what became known as the Harvester Judgment, was 42s (\$4.20) per week for Melbourne; the amount being considered reasonable for a 'family of about five'. This award remained largely unaltered until 1913 when the Court of Conciliation and Arbitration, as it then was, took notice of a retail price index prepared the year before by the Commonwealth Statistician. At intervals thereafter, as awards came before it for review, the Court usually revised the basic wage rate in line with variations in the retail price index.

Following considerable criticism of retention of the 'Harvester' standard, a royal commission was appointed in 1919 to inquire into the cost of maintaining a family of husband, wife, and three children under fourteen years of age in a reasonable standard of comfort, and further, into how the basic wage might be automatically adjusted to retain its purchasing power. The Court felt unable to authorise the considerable increases in the basic wage recommended by the royal commission, being unsure of the ability of industry to pay such rates. On the other hand automatic adjustments, varying the basic wage in direct ratio to variations in the retail price index, were introduced in 1921.

(1) Commonwealth Arbitration Reports, Vol. 77, p. 494.

No further change was made in the method of fixing or adjusting the basic wage until the depression years. In 1930 applications were made to the Court for a greater reduction in wages than was resulting from automatic adjustments for falling retail prices. The Court, while declining to make any change in the existing method of calculating the basic wage, in 1931 reduced all wage rates under its jurisdiction by 10 per cent. The male basic wage for Adelaide which had been \$8.85 per week in December 1929 was down to \$5.81 in December 1931. The Court in 1933 adopted a new series of retail price index numbers with a reduced influence on wages.

The 'Harvester' standard, adjusted to retail price variations, continued to be the theoretical basis of the basic wage until 1934. In that year new wage rates were declared on the basis of the 'C' Series retail price index, with provision for automatic quarterly adjustments in line with the index. At the same time the 10 per cent special reduction was abandoned, and at the end of 1934 the male basic wage for Adelaide was \$6.30 per week. The Court also fixed a separate wage for provincial towns, the wage for South Australian towns being 30c less than that for Adelaide.

A new concept known as 'prosperity' loadings was introduced in 1937. In this judgment the wage assessed on the 1934 basis was designated as the 'needs' portion of the total wage and was to be adjusted to a new Court Price Index. To this was added a prosperity loading, which was independent of price movements. The first prosperity loading for Adelaide was 40c, with separate loadings for provincial towns.

A further increase in the basic wage was sought in 1940; however, due to the uncertain economic conditions in war-time, no alteration was made and the application held over for a later decision. It was not until 1946 that the hearing was resumed. In its judgment the Court granted an increase of 70c in the needs portion of the wage and introduced a revised Court index for automatic quarterly adjustments.

The next adjustment to the basic wage came in 1949-50 when the adult male wage was increased by \$2.00. At the same time the prosperity loading was standardised at 50c and made adjustable with the rest of the wage, resulting in a rise in the basic wage for Adelaide of \$2.10 per week. The female rate, which had been 54 per cent of the male rate, was set at 75 per cent of the male basic wage.

In 1953 the Court granted an employers application for the deletion of quarterly adjustments, the last automatic adjustment being made in August of that year. A move was made for the restoration of quarterly adjustments in 1956, but the Court ruled that as the basic wage was based on capacity of the economy to pay it would be wrong to tie wage increases to price movements which were not necessarily related to capacity to pay. It was suggested instead that the basic wage be reviewed every twelve months. The ruling basic wage was increased by \$1.00.

Hearings were held in 1957, 1958, 1959, and 1960 with the unions on each occasion seeking the restoration of quarterly adjustments and an increase in the basic wage. The new authority, the Commonwealth Conciliation and Arbitration Commission, refused to restore quarterly adjustments but granted increases of \$1.00, 50c and \$1.50 respectively at the first three hearings and ruled against an increase in 1960.

An inquiry into basic wage differentials was held in the latter part of 1960 as a result of which the 30c country differential was eliminated.

In 1961 the unions applied for an increase in the basic wage and once again sought restoration of automatic adjustments. A wage increase of \$1.20 was granted. On this occasion the Commission, while refusing to grant automatic adjustments, agreed that where possible periodic allowances should be made for price fluctuations. It was accordingly proposed that the basic wage be reviewed annually in the light of the Consumer Price Index which had replaced the outdated 'C' Series index. Unless persuaded otherwise the Commission would each year adjust the wage level to price movements, but such adjustments should always be at the discretion of the Commission and not automatic. In addition to the annual review of price movements, it was proposed that a general review of the economy, and in particular of productivity increases, be conducted approximately every three to four years.

Following the 1961 decision inquiries were held at the beginning of 1962 and 1963, with the Commission deciding on each occasion in favour of no increase in the basic wage. In 1964 the Commission awarded a \$2.00 increase in the basic wage, while rejecting a further request for quarterly adjustments. An application from the employers to have the basic wage provisions deleted in favour of a combined total wage was also rejected.

In June 1965 the Commission decided to abandon the established practice of making separate adjustments to the basic wage and margins, in favour of a simultaneous annual review of basic wage and margins together. The Commission rejected a union claim for an increase in the basic wage, deciding instead to increase the marginal component of wages by $1\frac{1}{2}$ per cent of the award rate, or more precisely, of the total of the six capital cities combined basic wage and the current margin of the employee. The Commission reaffirmed that wage increases should be based on the ability of the economy to pay, and introduced price stability as a prime objective. In contrast to the 1961 decision the Commission rejected the relevance of the Consumer Price Index to their deliberations.

In July 1966 the Commission increased basic wage rates by \$2 per week for adult males with proportional increases for adult females and junior employees in accordance with percentages prescribed in the relevant award. It also expressed the opinion that, in addition to the amount of the basic wage, there should be an interim order in the unions' margins application so that no adult male employee in South Australia should be paid, as a weekly wage for the standard hours of work, less than \$36.55 at Whyalla and Iron Knob and \$36.05 elsewhere in the State. The Commission called for a report from the commissioner assigned to the metal industries concerning the classifications of work and marginal rates contained in the Metal Trades Award and made provision for an interim report to be made if the commissioner thought fit. Following applications from unions, an interim award of increases ranging from 30c for unskilled workers to \$1.10 for tradesmen was granted late in 1966.

After an extensive inquiry into secondary industry, the Full Bench of the Commission finally announced its decision in the Metal Trades Award case on 11 December 1967. Most workers under this award were to receive increases of between 10c and \$10.05 per week from the first pay period beginning on or after 22 January 1968, with adult females to receive 75 per cent of the appropriate increases for males. The application of this award resulted in considerable industrial unrest as unions sought to avoid the absorption of the additional margins into existing over-award payments. The Arbitration Commission therefore decided on 22 February 1968 that only 70 per cent of the rises granted should be payable immediately and that the remaining 30 per cent might be payable when the Full Bench reviews the national wage case in August 1968.

While the Metal Trades Work Value Wage Enquiry 1966-67 was being considered the findings of the 1967 National Wage Case were published. On 5 June 1967 the Full Bench of the Commonwealth Arbitration Commission decided to adopt a proposal suggested in part for a number of years by employers. The separation of wages into basic rates, margins for skill and prosperity loadings was abandoned and the Total Wage concept accepted instead. In delivering its decision the Commission granted an overall increase of one dollar per week to all adults covered by the Metal Trades Award and indicated that corresponding rises should flow to all federal awards. As well as the Total Wage policy the Commission had thus indicated a discontinuance of separate wage variations for males and females. The increases and the resulting minimum living wage (\$37.05 for adult males, \$37.55 at Whyalla and Iron Knob) were to operate from the first pay period beginning on or after 1 July 1967. The Commission did not indicate any single basis on which future wages cases must be settled. It is therefore possible for variations to be applied in equal absolute terms overall, or in equal proportionate changes overall, or for different levels of wages to receive separate consideration.

State Living Wage

The minimum weekly wage payable under an award or determination of a State industrial tribunal is known as the 'living wage' and, according to the Industrial Code 1967, is a sum sufficient for the needs of the average (unskilled) adult employee.

Although living wages of \$4.20 and \$4.80 per week were recorded in 1908 and 1913 respectively, these were of limited application, being restricted to the two awards in which they appeared. The first living wage with general application was awarded by the Industrial Court in the Living Wage (Tinsmiths) Case of 1916, when a wage of \$5.40 per week was fixed for adult males. An increase to \$6.30 was awarded in 1918, and a female wage of \$2.75 declared the same year.

Under the Industrial Code, 1920, responsibility for declaring a living wage passed to the Board of Industry. The Board was to conduct public inquiries into the average cost of living and to declare a living wage accordingly. The first such declaration was made in 1921 when weekly rates of \$7.95 for males and \$3.50 for females were fixed. The male rate reached \$8.55 in 1925 and then fell to \$6.30 in the depression years.

Although the Board of Industry was given power to differentiate between localities, all wage declarations prior to May 1947 applied to the State as a whole. At that stage the Board decided that the living wage at Whyalla and Iron Knob should be 50c in excess of that payable in Adelaide, to compensate for a higher cost of living. This loading is still in operation.

One of the provisions of the Industrial Code prohibited the Board of Industry from holding a new hearing within six months of a previous determination. Having made a determination in September 1946 the Board of Industry was therefore unable to adjust the living wage when the Commonwealth basic wage was increased in December of that year. A substantial disparity between the two wage rates appeared, resulting in provision being made under the Economic Stability Act, 1946, for the proclamation of a living wage based on the basic wage for Adelaide. The Board of Industry retained the power to declare a living wage which would supersede any declared by proclamation. An initial proclamation and two adjustments were made to the wage prior to the expiration of the Act at the end of 1947.

The Board of Industry awarded two further living wage increases before an amendment to the Industrial Code in 1949 provided for a quarterly adjustment of the living wage in accordance with variations in the basic wage for Adelaide. This provision resulted in the living wage and the basic wage being virtually synonymous from February 1950.

When the Commonwealth Court of Conciliation and Arbitration, late in 1950, increased the male basic wage by \$2.00 and the female rate to 75 per cent of the male wage, State Parliament promptly amended the Industrial Code to make permanent provision for the declaration of the living wage by proclamation.

Quarterly cost-of-living adjustments to the living wage ceased in 1953 following the decision of the Court of Conciliation and Arbitration to abandon such adjustments for the basic wage.

Although the Board of Industry (now the Full Bench of the Industrial Commission) has retained the power to amend the living wage, it has not done so since 1949, all subsequent variations having been made by proclamation following basic wage judgments until June 1967, when the Commonwealth Conciliation and Arbitration Commission introduced the total wage system and the State living wage was increased by \$1.00 for all adults.

Adjustments to the living wage since 1920 are illustrated in the graph on page 265.

Basic wage and living wage rates applicable at 31 December each year since 1951 are recorded in the following table. The basic wage and the living wage have been the same since February 1950 except in 'other country districts' where the 30c differential operating until 1961 applied to the basic wage only.

Commonwealth Basic Wage and State Living Wage, South Australia

At 31 December

Year	Adelaide		Whyalla and Iron Knob	Other Country Districts (a)
	Males	Females	Males	Males
	\$	\$	\$	\$
1951.....	19.50	14.60	20.00	19.20
1952.....	22.90	17.15	23.40	22.60
1953.....	23.10	17.30	23.60	22.80
1954.....	23.10	17.30	23.60	22.80
1955.....	23.10	17.30	23.60	22.80
1956.....	24.10	18.05	24.60	23.80
1957.....	25.10	18.80	25.60	24.80
1958.....	25.60	19.20	26.10	25.30
1959.....	27.10	20.30	27.60	26.80
1960.....	27.10	20.30	27.60	26.80
1961.....	28.30	21.20	28.80	28.30
1962.....	28.30	21.20	28.80	28.30
1963.....	28.30	21.20	28.80	28.30
1964.....	30.30	22.70	30.80	30.30
1965.....	30.30	22.70	30.80	30.30
1966.....	32.30	24.20	32.80	32.30
1967 (b)	33.30	25.20	33.80	33.30

(a) Commonwealth basic wage only. State living wage was same as Adelaide.

(b) State living wage only. Commonwealth basic wage superseded by total wage.

Award Wages

The minimum weekly amounts provided in awards, determinations, and registered agreements under Commonwealth and State jurisdiction are known as award rates. The amounts shown in the following tables are a weighted average of minimum weekly wage rates payable to adult males and females in South Australia. Generally these are award rates; however, in a few cases where registered agreements are dominant in a particular industry, rates prescribed therein are used. The amounts shown should not be regarded as actual current averages, but rather as indexes expressed in money terms.

The minimum rates used are for representative occupations within each industry, the weights for each occupation and industry being based on sample surveys conducted in 1954, with allowance made where necessary for subsequent changes in the industrial structure. Because of coverage difficulties rural industries are excluded. The statistics are designed to show movements in minimum wages as distinct from salaries, with the result that those awards, etc. which relate solely or mainly to salary earners have been excluded.

The first table shows weighted average minimum weekly wage rates for adult males and adult females with separate details shown for male employees covered by awards etc. within Commonwealth and State jurisdictions. The index numbers refer to the total adult male and female wage rates. Classified as Commonwealth are awards of, or agreements registered with, the Commonwealth Conciliation and Arbitration Commission and determinations of the Commonwealth Public Service Arbitrator. Incorporated under the State heading are awards or determinations of, or agreements registered with, State industrial tribunals, together with any unregistered agreements used in the computations.

Minimum Weekly Wage Rates^(a): South Australia

31 December	Rates of Wage				Index Numbers (Base: Australia 1954 = 100)	
	Adult Males			Adult Females (All Awards)	Adult Males	Adult Females
	Common- wealth Awards, Etc.	State Awards, Etc.	All Awards			
	\$	\$	\$	\$		
1939.....	9.52	9.18	9.41	(b)	33.3	(b)
1945.....	11.76	11.25	11.60	(b)	41.1	(b)
1948.....	15.41	14.81	15.22	(b)	53.9	(b)
1951.....	23.72	23.35	23.60	17.02	83.6	85.5
1954.....	28.51	27.42	28.16	19.99	99.7	100.4
1957.....	30.92	30.22	30.69	21.95	108.7	110.3
1960.....	34.54	33.49	34.22	24.29	121.2	122.0
1963.....	36.81	35.48	36.40	25.52	128.9	128.2
1964.....	39.00	37.98	38.69	27.29	137.0	137.1
1965.....	39.87	38.58	39.48	27.75	139.8	139.4
1966.....	42.13	40.90	41.75	29.42	147.8	147.8
1967.....	44.15	42.92	43.78	31.30	155.0	157.2

(a) Weighted average of minimum weekly rates payable for a full weeks work (excluding overtime) as prescribed in awards, determinations and agreements. Excludes rural industries.

(b) Comparable figures are not available.

In the next table weighted average minimum weekly wage rates for males and females are shown for individual industrial groups.

Minimum Weekly Wage Rates^(a): Industrial Groups, South Australia

At 31 December

Industrial Group	1963	1964	1965	1966	1967
	\$	\$	\$	\$	\$
ADULT MALES					
All industrial groups	36.40	38.69	39.48	41.75	43.78
Mining and quarrying	36.05	38.40	38.90	40.98	43.04
All manufacturing groups	36.36	38.61	39.18	41.26	43.10
Engineering, metal works, etc. ...	36.58	38.77	39.28	41.24	43.05
Textiles, clothing and footwear ..	34.68	36.93	37.53	39.58	41.28
Food, drink and tobacco	35.42	37.48	38.20	40.32	41.99
Sawmilling, furniture, etc.	36.08	38.08	38.74	40.81	42.70
Paper, printing, etc.	39.30	42.20	42.47	46.14	47.85
Other manufacturing	35.98	38.47	39.19	41.29	43.34
Building and construction	36.84	39.29	40.25	43.10	45.59
Railway services	35.48	37.60	38.51	40.70	42.49
Road and air transport	35.55	37.62	38.84	41.26	43.19
Shipping and stevedoring	36.71	38.81	39.65	41.88	43.85
Communication	40.88	44.10	47.09	49.30	52.77
Wholesale and retail trade	36.18	38.46	39.14	41.60	43.67
Public authority (n.e.i.) and community and business services...	34.98	37.25	38.50	40.80	43.10
Amusement, hotels, personal services, etc.	34.58	36.58	37.10	39.26	40.81
ADULT FEMALES					
All industrial groups	25.52	27.29	27.75	29.42	31.30
All manufacturing groups	24.99	26.72	27.03	28.71	30.42
Engineering, metal works, etc. ...	24.88	26.59	26.82	28.53	30.22
Textiles, clothing and footwear ..	25.35	26.97	27.37	28.90	30.72
Food, drink and tobacco	24.81	26.51	26.77	28.62	30.17
Other manufacturing	24.84	26.79	27.43	29.18	31.04
Transport and communication ..	26.85	28.89	30.69	32.33	34.73
Wholesale and retail trade	26.22	28.02	28.39	30.09	32.22
Public authority (n.e.i.) and community and business services...	26.01	27.95	28.54	30.18	32.24
Amusement, hotels, personal service, etc.	24.14	25.72	26.13	27.73	29.01

(a) For details of coverage see text above.

In May 1963 a survey was conducted to estimate the proportion of employees affected by awards, determinations, and registered agreements. The following table indicates the approximate proportions found to be affected under Commonwealth and State jurisdiction respectively. Also shown are the proportions of employees whose rates of pay and working conditions were not affected by awards, determinations or registered agreements including those working under unregistered agreements. Employees in rural industry and in private domestic service were excluded altogether from the survey.

**Incidence of Awards, Determinations, and Registered Agreements
South Australia, May 1963**

Employees	Represented in Estimates	Affected by Commonwealth Awards, Etc.	Affected by State Awards, Etc.	Not Affected by Awards, Etc.
	'000	%	%	%
Males	194	55.7	29.0	15.3
Females	64	23.7	62.3	14.0

EARNINGS

Figures given in this section relate to actual average weekly earnings (including award wages, salaries, overtime earnings, over-award and bonus payments and prepayments) of all wage earners and salaried employees, whether adult or junior, full-time, part-time, or casual. Payments to members of the defence forces are excluded.

Particulars of wages and salaries are not available for males and females separately and average earnings have therefore been calculated by dividing total civilian employment expressed in terms of 'male units'. Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings.

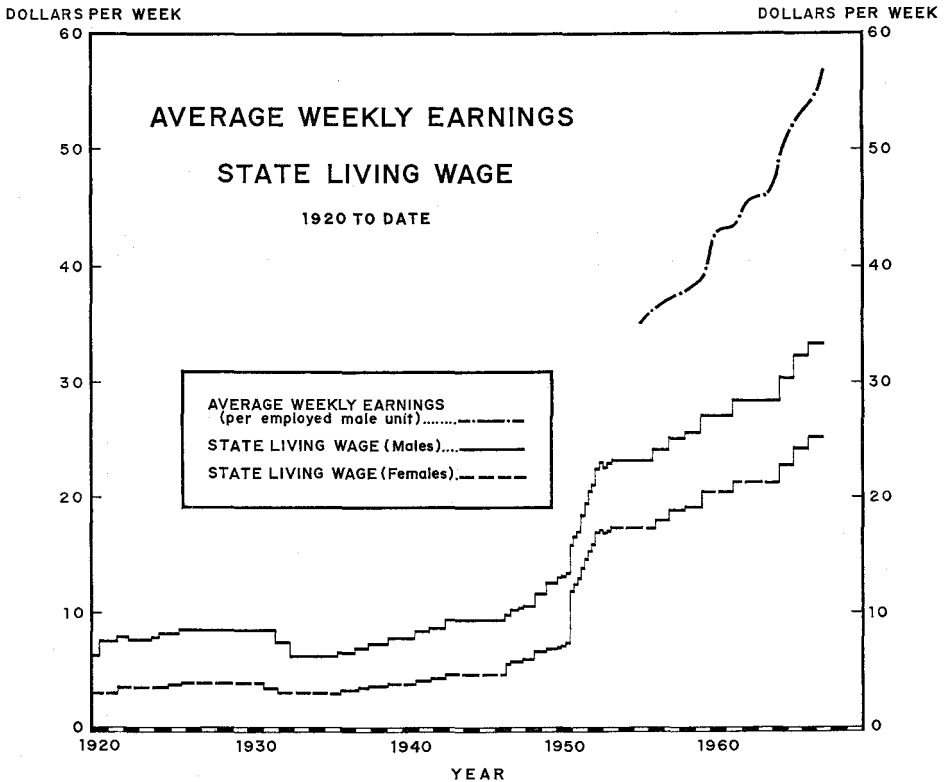
As quarterly figures are affected by seasonal influences, comparisons for trends should be made by relating complete years or corresponding quarters. From December quarter 1963, comparisons with corresponding quarters of earlier years are affected by additional prepayments arising from extensions of annual leave from two to three weeks. Due to variation in coverage, etc. these figures cannot be related to the minimum weekly wage rates shown in the preceding section.

Average Weekly Earnings per Employed Male Unit, South Australia^(a)

Year	September Quarter	December Quarter	March Quarter	June Quarter	Year
	\$	\$	\$	\$	\$
1956-57 ..	36.60	37.80	35.20	37.20	36.70
1957-58 ..	37.60	38.90	36.30	37.90	37.70
1958-59 ..	38.70	40.20	36.70	38.80	38.60
1959-60 ..	41.20	42.20	40.80	43.10	41.80
1960-61 ..	43.30	44.80	42.00	43.30	43.40
1961-62 ..	44.00	45.80	43.40	45.70	44.70
1962-63 ..	45.30	47.40	44.50	46.00	45.80
1963-64 ..	46.70	50.30	46.50	49.10	48.20
1964-65 ..	52.20	53.40	50.10	52.30	52.00
1965-66 ..	54.60	55.30	51.40	53.80	53.80
1966-67 ..	56.50	57.80	55.30	57.90	56.90
1967-68 ..	60.00	61.60	58.80		

(a) Includes Northern Territory.

Trends in average weekly earnings are expressed in the following graph, together with adjustments to the State living wage for males and females since 1920.



Separate estimates of the average weekly earnings of males and females, and of adults and juniors, have been obtained from sample surveys conducted in the last pay-periods of October 1962, 1963, 1964, 1966, and 1967.

These surveys were based on a sample selection of private employers subject to pay-roll tax. Consequently employees of government and semi-government authorities and of religious, benevolent, and similar organisations exempt from pay-roll tax are excluded. Also specifically excluded are employees in rural industry and private domestic service, and casual waterside workers.

Employers selected gave details of all employees (other than part-time) whose hours of work were known and who were not involved in managerial, executive, professional, or higher supervisory functions.

Summarised results of the first four surveys are given in the following table while details of the 1967 survey will be included in the next edition.

Average Earnings, South Australia

Particulars	Average Weekly Earnings				Average Hourly Earnings			
	October 1962	October 1963	October 1964	October 1966	October 1962	October 1963	October 1964	October 1966
	\$							
Males								
Adult.....	47.00	49.30	53.60	58.00	1.11	1.15	1.24	1.35
Junior.....	21.20	22.50	24.80	27.70	0.52	0.55	0.61	0.68
Females								
Adult.....	28.60	28.50	31.10	33.70	0.73	0.71	0.78	0.85
Junior.....	18.00	18.20	20.10	22.30	0.46	0.46	0.51	0.57

Similar surveys were conducted in 1961 and 1965 to determine the distribution of employees at various levels of earnings. On both occasions the survey was restricted to adult male employees while part-time and casual employees were excluded. Government employees were included only in the 1965 survey.

Adult Male Employees: Levels of Earnings, South Australia, October 1965

Earnings Per Week	Manufacturing			Non-Manufacturing			Total		
	Private	Govt	Total	Private	Govt	Total	Private	Govt	Total
PERCENTAGE IN EACH GROUP									
Less than \$36 (a)	3.1	3.1	3.1	1.9	2.6	2.1	2.7	2.7	2.7
\$36 and less than \$40.....	6.4	6.6	6.5	9.1	9.4	9.2	7.4	8.7	7.7
\$40 and less than \$44.....	10.8	11.3	10.8	13.6	15.3	14.4	11.7	14.3	12.5
\$44 and less than \$48.....	13.6	15.2	13.8	12.3	15.0	13.6	13.2	15.0	13.7
\$48 and less than \$52.....	12.7	11.0	12.5	16.2	13.4	14.9	13.9	12.8	13.6
\$52 and less than \$56.....	13.0	13.2	13.0	10.5	11.8	11.1	12.1	12.2	12.1
\$56 and less than \$60.....	9.4	9.2	9.4	8.9	8.1	8.5	9.2	8.3	9.0
\$60 and less than \$70.....	16.6	12.7	16.1	14.0	12.7	13.4	15.7	12.7	14.8
\$70 and less than \$80.....	14.4	9.2	14.8	13.5	6.7	12.8	8.1	7.4	7.9
\$80 and over	8.5			5.0			6.0	5.9	6.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes some who received less than the basic wage because they were on training rates, retainers only in survey work, elderly persons, etc.

In the private sector 34.6 per cent of all employees earned between \$36 and \$44 per week in 1961, whereas in 1965, 39.2 per cent earned between \$44 and \$56 per week. The 1965 results reveal that 35 per cent of employees in the private sector earned less than \$48 per week and 29.8 per cent earned \$60 or more. The corresponding details in the Government sector were 40.7 per cent and 26.0 per cent.

HOURS OF WORK

In 1914 in South Australia the average working time per week excluding overtime was in excess of forty-eight hours for males and forty-nine hours for females. By 1921 the average working week was about forty-seven and forty-six hours respectively.

In 1927 the Commonwealth Court of Conciliation and Arbitration granted a standard working week of forty-four hours to the Amalgamated Engineering Union, and intimated that this reduction would be extended to other industries

operating under similar conditions. In the same year the first 44-hour week under a State award was granted. The extension of the 44-hour week was delayed, however, by the onset of the depression, and the average working week (excluding overtime) for males was only slightly less than forty-seven hours at the end of 1931. Throughout the 1939-45 War the average working week was between forty-four and forty-five hours.

At the end of the war applications were made to the Commonwealth Court of Conciliation and Arbitration for a 40-hour week. Following an extensive hearing, the Court granted the reduction to forty hours in September 1947. In the following month the State Industrial Court, after hearing applications by unions, approved the incorporation of the 40-hour standard week into State awards. In general, the 40-hour week operated from the first pay-period in 1948.

In 1952 the employers approached the Commonwealth Court of Conciliation and Arbitration for an increase in the standard working week, but the application was rejected. A further application was made to the Commonwealth Conciliation and Arbitration Commission in 1961, this time seeking a temporary increase in the working week to forty-two hours with an accompanying increase in wages. This application was also rejected.

Today the 40-hour week is the standard working week for employees under Commonwealth and State awards; however, the number of hours constituting a full week's work varies between occupations. Certain Commonwealth awards covering rural industries prescribe hours in excess of forty, while other occupations by tradition work less than forty hours, although forty hours is generally retained in their awards.

The weighted average standard hours (excluding overtime) prescribed in awards, determinations, and agreements for a full working week for adult male employees in all industries in South Australia, except rural, shipping, and stevedoring, was 39.96 hours at 31 December 1964. This compared with 44.62 hours at 31 March 1939 and 43.83 hours at 30 September 1947 immediately prior to the introduction of the 40-hour week. The weighted average for female employees at 31 December 1964 was 39.77 hours. The weighted average figure for males and females has not changed significantly since 1964.

The normal working day is of eight hours duration, and employees working beyond these hours are paid penalty rates. Award overtime rates are generally on the basis of time-and-a-half for the first four hours, with double-time thereafter. Double-time generally applies also to Saturday afternoon and Sunday work. Provision usually restricts overtime so that the employee has a break of at least eight hours before resuming duty. Awards in certain industries provide for broken time and shift work. Employees on shift work normally rotate between shifts, receiving a loading for the working of afternoon and evening shifts.

The following table shows the relative distribution of employed civilian wage and salary earners in manufacturing industries for the six Australian State capital cities according to the number of hours worked in a specified week, as recorded in the August Work Force Surveys for the years 1963-67. The distribution is based on actual hours worked, including overtime, not hours paid for, and is therefore affected by public holidays, leave, absenteeism, temporary absence from work due to sickness, accident and industrial disputes, and work stoppages due to plant breakdowns and weather.

Distribution of Hours Worked^(a), Six Australian State Capital Cities
(Manufacturing Industries Only)

Period	Proportion who Worked the Following Hours in the Specified Week							Total
	0-14	15-24	25-34	35-40	41-44	45-48	Over 48	
	Per Cent							
August								
1963.....	3.7	1.9	6.0	74.3	5.1	5.2	3.8	100.0
1964.....	4.0	2.2	4.4	71.2	5.7	6.6	5.9	100.0
1965.....	4.0	2.1	4.5	69.5	5.7	7.6	6.6	100.0
1966.....	3.9	2.6	4.5	68.4	5.6	7.5	7.5	100.0
1967.....	3.3	2.6	5.7	66.7	5.6	8.0	8.1	100.0

(a) Employed wage and salary earners, fourteen years of age and over until 1965. Subsequent figures relate to persons fifteen years of age and over.

HOLIDAYS AND LEAVE

Public Holidays

A number of days are observed each year throughout the State as public holidays and additional days may be proclaimed either on a State-wide basis or applicable to particular localities. Employees required to work on public holidays normally receive an extra day's pay and are paid at penalty rates.

The traditional public holidays are: New Years Day (first week-day in January); Australia Day (first Monday after 25 January); Good Friday, Easter Saturday, Easter Monday; Anzac Day (25 April or the following day if 25 a Sunday); Queens Birthday (by proclamation); Eight Hours Day (second Monday in October); Christmas Day (a holiday may be proclaimed for the following Monday if it falls on Sunday); and Proclamation Day (28 December or the following Monday if 28 falls on Saturday or Sunday).

Annual Leave

Prior to 1936 the granting by Commonwealth tribunals of annual leave on full pay was restricted to exceptional cases. However, in that year the Commonwealth Court of Conciliation and Arbitration granted one weeks annual leave to employees in the printing industry. Thereafter annual leave was gradually introduced into other awards.

In 1945 the Court was approached for an extension of annual leave to two weeks. Although delineating the principles to be followed in considering applications for two weeks leave, the Court chose to leave the question of altering any particular awards to the discretion of the single Judges hearing the applications.

An approach for three weeks annual leave was made to the Commonwealth Conciliation and Arbitration Commission in 1960 by unions covered by the Metal Trades Award. In its judgment the Commission rejected the general application of three weeks annual leave on economic grounds, but at the same time envisaged special cases where leave longer than two weeks would be justified. A further application for the general adoption of three weeks leave was made in 1962 but the Commission was still not satisfied with the ability of the economy to cope with such an increase. In April 1963 the Commission granted three weeks annual leave to employees under the Metal Trades Award who had completed twelve months continuous service. Provision was also made for holiday pay on a proportionate basis for employees who had completed one months service but

whose employment was terminated before twelve months. Application of the new standard to other awards was left to individual Commissioners.

In May of the same year the State Industrial Court announced an increased standard of annual leave for employees under State awards, adopting for this purpose the Commonwealth standard. At present the majority of employees receive at least three weeks paid annual leave. In addition to recreation leave most Commonwealth and State awards provide a sick leave entitlement. Generally employees are entitled to at least one weeks sick leave on full pay during each year of service, with varying provisions for the accumulation of unused leave.

Long Service Leave

Legislative provision for the granting of long service leave to employees was introduced in the Long Service Leave Act of 1957. This State legislation applied also to employees under Commonwealth awards, as the Commonwealth Conciliation and Arbitration Commission had refrained from determining disputes concerning long service leave. The Act provided for one weeks leave in the eighth and each subsequent year of continuous service. Exempted from the State legislation are employers bound by an award or agreement to provide long service leave to employees covered by such an award or agreement, and employers providing long service leave, superannuation benefits or other similar benefits considered to be not less favourable than entitlement under the Act.

Later in 1957 employer organisations in a majority of industries signed agreements adopting a 'Federal Code of Long Service Leave' providing for thirteen weeks leave after twenty years service. The attraction of the Federal Code was that it recognised service dating back to 1937, whereas the Long Service Leave Act did not recognise service prior to 1950. The majority of South Australian employees are entitled to long service leave under the Federal Code.

Employees under a number of awards introduced since 1964 are entitled, at least in relation to future service, to thirteen weeks leave after fifteen years. In that year the Commonwealth Conciliation and Arbitration Commission provided for the first time for the inclusion of long service leave provisions in a Commonwealth award, granting employees in the graphic arts and metal trades industries leave on the basis of thirteen weeks for twenty years service in respect of employment prior to the decision, and thirteen weeks for fifteen years in respect of future service. These provisions have been extended to certain other Commonwealth awards. In a number of other cases, registered agreements provide for thirteen weeks leave after fifteen years service.

In 1966, the South Australian Industrial Commission varied a long service agreement, applicable to many employees, by prescribing long service leave on the basis of thirteen weeks for twenty years service for service prior to 1 January 1966 and thirteen weeks for fifteen years service for service after that date.

State and local government employees are in general entitled to thirteen weeks leave after ten years service, and Commonwealth Government employees to four and a half months after fifteen years service.

The various long service leave arrangements provide for additional *pro rata* periods of leave for service in excess of the minimum, and for *pro rata* payments for employees who have completed a specified term of service but who, through the termination of their services or through death, do not complete the full entitlement period.

7.4 INDUSTRIAL SAFETY

SAFETY REGULATIONS AND INSPECTION

Most of the legislation directed at industrial safety is administered by the Department of Labour and Industry, although other authorities hold responsibilities in certain fields.

Department of Labour and Industry

The general working conditions in factories, shops, offices and warehouses are regulated by the Industrial Code, 1967 which repeals the Industrial Code, 1920-1966 and the Country Factories Act, 1945-1965. Inspections are made by departmental officers to ensure that the requirements of the Industrial Code Act with respect to safeguarding of machinery, safety of processes, cleanliness and general working conditions in factories are being observed.

The registration and inspection of steam boilers and other pressure vessels is provided for under the Steam Boilers and Enginedrivers Act, 1935-1952. The Lifts Act, 1960, regulates the use of lifts, escalators, cranes and hoists, with the department required to approve new installations and regularly inspect existing lift equipment. The Inflammable Liquids Act, 1961, and the Liquefied Petroleum Gas Act, 1960, regulate the storage and carriage of these products. The Construction Safety Act, 1967, which came into operation on 1 April 1968, widens the scope of safety supervision. Under this Act, persons in charge of rigging work must be certificated by the Department. The Act also provides that at every building or construction site where more than twenty hands are employed a safety supervisor must be appointed. Provision of on-site amenities now comes within this Act rather than the Industrial Code.

Department of Mines

Regulations under the Mines and Works Inspection Act, 1920-1966, provide for the health and safety of persons engaged in mining or quarrying and for the protection of the general public. Mining sites must be maintained in safe conditions with specific attention given to ventilation, sanitation, and the use of explosives. Officers of the department inspect mines and quarries, check old workings, and investigate mining accidents.

Department of Public Health

Health aspects of industrial safety are the responsibility of the Occupational Health Section of the Department of Public Health. The department investigates health hazards resulting from the presence of toxic and noxious substances in industry, both on its own initiative and on reference from employers, unions, other authorities, and individuals. Investigations are carried out where radioactive and irradiating apparatus is in use for industrial, scientific, or medical purposes.

Chemistry Department

The Explosives Act, 1936-1963, regulates the importation, manufacture, carriage, storage, and sale of explosives. The Chemistry Department is responsible for the maintenance of government magazines and the licensing and inspection of private magazines. Vehicles used in the carriage of explosives are also licensed. Almost all commercial explosives, including fireworks, entering the State are inspected by the department.

Electricity Trust of South Australia

Electrical installations are required to conform to the service rules of the Electricity Trust and the wiring rules of the Standards Association of Australia, and are subject to inspection by Electricity Trust officers. From 2 January 1968 persons engaged in the installation, maintenance or repair of electrical services and permanently connected equipment must be licenced to do this work in accordance with the provisions of the Electrical Workers and Contractors Licensing Act, 1965-1966.

WORKMEN'S COMPENSATION**Legislation**

The first Workmen's Compensation Act was passed in 1900. Covering factories and certain industries considered as offering hazards to employees, the **Act set out a scale of compensation to be paid in the event of an accident without negligence by the employer having to be proved.** Considerable amending legislation followed this early Act, and new Acts were passed in 1911 and 1932, gradually broadening the scope of the legislation as to persons covered, contingencies included, and the scale of benefits.

Current legislation, the Workmen's Compensation Act, 1932-1966, covers workmen whose average weekly earnings do not exceed \$110 against personal injury arising out of or in the course of their employment. The coverage extends to recess periods, travelling to or from work, travelling to or from or attending a trade or technical school, and travelling for medical treatment while on compensation. Diseases due to the nature of the employment are treated as injury, and special provision is made for silicosis and for certain industrial diseases contracted at Port Pirie.

Excluded from the scope of the Act are casual workers, outworkers, service personnel and Commonwealth employees; the last-named being covered by the *Commonwealth Employees' Compensation Act 1930-1964*.

Where death results from the injury, provision is made for compensation to be paid to the workman's family. In the case of dependants who are wholly dependent, the Act provides for a maximum payment of a lump sum based on four years earnings plus \$220 for each dependent child under sixteen years, with a minimum payment of \$2,200 and a maximum of \$12,000 plus the dependent child allowance. Proportionate payments are made to partial dependants, and where there are no dependants medical and funeral expenses are met.

Where the accident results in total incapacity, the worker receives a weekly payment of between \$12 and \$22 plus allowances for spouse and dependent children, with a maximum payment of \$32.50 or average weekly earnings, whichever is the less. Payment in relation to loss of earning capacity is made in the case of partial incapacity.

Provision is made for lump sum payments in lieu of weekly payments. Such payments are arranged by agreement; or after six months, by arbitration on application of either employer or employee. The total liability of the employer is limited to \$12,000 in the case of total incapacity and \$9,000 for partial incapacity, in addition to weekly payments already made. Lump sum compensation is also provided for certain specified injuries, e.g. loss of limbs.

In addition to other compensation reasonable medical, hospital, nursing, and ambulance expenses are paid and compensation to \$60 is provided for damaged clothing.

The Minister responsible for administering workmen's compensation is the Treasurer, with the Treasury responsible for surveillance of the Workmen's Compensation Act and Regulations.

Workmen's Compensation Insurance

The Workmen's Compensation Act requires every employer, unless specifically exempted, to obtain from a licensed insurance company a policy which fully covers his liability under the Act. The exemptions are the State Government which provides its own cover through the Government Accident Insurance Office, the South Australian Railways Commissioner, and any employer who can satisfy the Minister of his ability to meet all probable claims and who is accordingly issued with a certificate of exemption.

The following table shows the number of effective claims lodged with, and total compensation payments made by, insurance companies and self insurers during each of the last five years. Payments shown against any year will include some payments arising from claims lodged in earlier years.

**Workmen's Compensation Claims
South Australia**

Year	Claims Lodged	Payments Made
	No.	\$'000
1962-63	48,000	3,552
1963-64	51,350	3,866
1964-65	55,600	4,306
1965-66	58,350	4,725
1966-67	56,500	5,395

INDUSTRIAL ACCIDENTS

Detailed information on industrial accidents in South Australia was first collected in 1961. Statistics are compiled from reports of workmen's compensation claims submitted by insurance companies, self-insurers, and State Government departments through the South Australian Department of Labour and Industry.

The collection is restricted to fatal accidents and to accidents causing an absence from work of one week or more. Cases involving travelling to or from place of employment, occurring during a recess period, or involving diseases are excluded.

Particulars of the number of industrial accidents, of time lost, and compensation paid are given below for the years 1962-63 to 1966-67. The figures for any one year relate to claims closed during the year and to unclosed claims at the end of the year which have been outstanding for three years.

Of the 10,453 non-fatal accidents in 1966-67, 1,004 involved females. No accident resulting in the death of a female has been reported since statistics have been compiled.

Industrial Accidents, South Australia

Particulars	Unit	1962-63	1963-64	1964-65	1965-66	1966-67
Accidents :						
Fatal	No.	25	20	17	23	14
Non fatal	No.	10,498	11,098	11,809	10,522	10,453
Time lost :						
Total	week	40,959	43,867	43,376	37,659	40,306
Average per accident	week	3.9	4.0	3.7	3.6	3.9
Amount Paid (a) :						
Fatal accidents	\$'000	135.2	129.6	103.3	166.3	131.7
Non-fatal accidents.	\$'000	2,037.4	2,348.3	2,504.5	2,212.0	2,784.5
Total	\$'000	2,172.6	2,477.9	2,607.8	2,378.3	2,916.2
Average per non-fatal accident.	\$	194	212	212	210	266

(a) Compensation for wages lost, hospital and medical expenses, and lump sum settlements.

Industrial accidents for 1966-67 are classified below by industry group. As the statistics are based on workmen's compensation claims, persons outside the scope of the South Australian Workmen's Compensation Act are excluded. Notable exclusions are self-employed persons and all Commonwealth Government employees. Thus persons employed within some industry groups, *e.g.* defence services and communication, are not covered at all while coverage is reduced in other groups, particularly in commerce and primary production.

Industrial Accidents: Industry Groups, South Australia, 1966-67

Industry Group	Fatal Accidents		Non-fatal Accidents			
	Number	Amount Paid (a)	Number	Proportion of Total	Time Lost	Amount Paid (a)
		\$'000		%	Weeks	\$'000
Primary production	—	—	912	8.7	3,467	210.3
Mining and quarrying	—	—	97	0.9	362	29.4
Manufacturing	6	81.2	4,515	43.2	17,037	1,301.1
Electricity, gas, water, and sanitary services	—	—	571	5.5	2,270	136.2
Building and construction ..	3	13.7	1,468	14.0	5,917	416.3
Transport and storage	2	14.4	777	7.4	3,300	182.6
Finance and property	—	—	31	0.3	140	14.8
Commerce	3	22.5	1,356	13.0	4,908	337.2
Public authority (n.e.i.) and community and business services	—	—	398	3.8	1,688	100.1
Amusement, hotels, accommodation, cafes, etc.	—	—	328	3.1	1,217	56.3
Total	14	131.7	10,453	100.0	40,306	2,784.5

(a) Compensation for wages lost, hospital and medical expenses, and lump sum settlements.

Most of the non-fatal accidents in 1966-67 involved injuries to the arm or hand (3,885), the leg or foot (2,811) or the trunk (2,727). Other accidents resulted in 326 eye injuries, 324 head injuries and 345 injuries to the neck or spine.

In the following table industrial accidents are allocated to an accident factor, this being the underlying agency, other than human failing, which appeared to contribute most materially to the accident.

Industrial Accidents: Accident Factor, South Australia

Accident Factor	1962-63	1963-64	1964-65	1965-66	1966-67
Machinery	1,219	1,403	1,316	1,165	1,233
Vehicles	601	593	533	455	459
Electricity, explosions, flames, hot substances	292	256	345	276	258
Falling, slipping, stumbling, etc. .	2,162	2,360	2,445	2,212	2,222
Striking against, stepping on, etc.	566	518	640	593	567
Struck by moving or falling objects	1,746	1,725	2,258	2,057	1,722
Strain in handling	1,858	2,050	2,279	2,068	2,096
Sharp objects	470	490	465	402	465
Hand tools	1,035	1,101	950	859	875
Miscellaneous	574	622	595	458	570
Total	10,523	11,118	11,826	10,545	10,467

Falling, slipping, stumbling, etc. caused 22.0 per cent of accidents in 1966-67. The majority of these resulted in sprains, bruising, and superficial injury, although 385 cases involved actual fractures or dislocations and four were fatal.

The fourteen fatal accidents reported in 1966-67 included the four mentioned above; one attributable to machinery; three to vehicles; three to moving or falling objects and three to stepping on or striking against stationary objects.

PART 8

PHYSICAL DEVELOPMENT

8.1 WATER SUPPLY AND SEWERAGE

WATER SUPPLY

With 96 per cent of the State receiving less than 20 inches of rain per annum, and high evaporation increasing the demand for water and causing heavy losses from reservoirs, water conservation is of vital importance to South Australia. Water supplies, other than in irrigation areas, are under the control of the Engineering and Water Supply Department through the Waterworks Act, 1932-1966, and the Water Conservation Act, 1936.

METROPOLITAN WATER SUPPLY

From 1836 to 1860 the inhabitants of Adelaide and the surrounding plains obtained their water from the River Torrens and other streams, from springs and shallow wells, or by collecting the water shed from roofs.

Growth of population caused the primitive methods of supply and distribution to become inadequate and in December 1860 Adelaide received its first supply under pressure from Thorndon Park Reservoir. This early reservoir situated seven miles north-east of Adelaide is filled from a diversion weir on the Torrens Gorge. A second reservoir—Hope Valley—completed in 1872, is also filled from the River Torrens. These reservoirs are of a low altitude and residents of the eastern foothills still had to rely on local creeks, or on water pumped into storage tanks, for their supply.

In 1888 a royal commission recommended the construction of a reservoir to be fed from the River Onkaparinga—Happy Valley Reservoir being completed in 1896. The next major development was the completion of the Millbrook Reservoir in 1918 on the Chain of Ponds Creek, its intake coming from the River Torrens through a mile long tunnel. Mount Bold, completed in 1938, differs from the earlier reservoirs in that it does not lead directly into a reticulation system. Built on the Onkaparinga it functions as a storage for the Happy Valley Reservoir. With the construction of Mount Bold Reservoir the only catchment areas in immediate proximity to Adelaide, namely the Torrens and Onkaparinga areas, had been harnessed.

Continued population growth, however, necessitated increased supply and in 1945 over fifty boreholes were drilled in the Adelaide Artesian Basin, a basin of approximately thirty square miles to the north and west of the city. These bores can be brought into operation at short notice and yields vary from 500 to 25,000 gallons per hour.

The feasibility of Adelaide augmenting its water supply by means of a pipeline from the River Murray had been considered on a number of occasions, and in 1949 the project was commenced. The first Murray water reached the metropolitan system in 1954. The water is drawn from the river at Mannum, nearly forty-two miles in a direct line from Adelaide, and is raised by three pumping stations a total of 1,490 feet to a 30 million gallon summit storage near Tungkillo. At first the water flowed into the Torrens and Onkaparinga Rivers and hence into the metropolitan system; later the pipeline was extended to a terminal storage near Modbury. The Mannum-Adelaide pipeline is also connected to the Warren Reservoir on the South Para River and branches serve many country areas *en route*.

With the growing demand for water in Adelaide and areas immediately to the north, investigations were focused on a site on the South Para River, the potentiality of this site having been recognised as far back as 1878. The South Para Reservoir was completed in 1958 and supplies water, *via* the Barossa Reservoir, to the metropolitan area and the Lower North. In 1960 the capacity of the South Para Reservoir was increased.

There was also considerable development taking place in areas to the south of the metropolitan area, and in 1958 a dam was commenced on the Myponga River thirty-four miles south of Adelaide. The Myponga Reservoir, completed in 1962, supplies surrounding districts and areas to the south of Adelaide, surplus water being fed into the Happy Valley Reservoir.

The Mount Bold dam was raised in 1962, increasing the capacity of the reservoir by over 50 per cent.

The following table shows particulars of the Adelaide Metropolitan Waterworks system for the past five years.

Adelaide Metropolitan Waterworks, South Australia

Particulars (a)	1962-63	1963-64	1964-65	1965-66	1966-67
Length of Mains (miles)	3,025	3,147	3,333	3,456	3,650
Number of Services	200,000	211,163	220,128	228,342	238,121
	\$'000				
Revenue:					
Rates and Excess Water	6,818	7,742	8,359	9,441	11,003
Other	129	130	58	80	80
Total	6,947	7,872	8,417	9,521	11,083
Expenditure:					
Working Expenses	4,217	3,936	4,222	5,292	5,142
Interest	3,380	3,610	3,907	4,248	4,500
Total	7,597	7,546	8,129	9,540	9,642
Surplus	—649	326	288	—19	1,441

(a) Includes particulars relating to near country areas supplied by extensions of Metropolitan distribution systems.

A new reservoir to be known as the Kangaroo Creek Reservoir is currently under construction in the Torrens Gorge downstream from the Millbrook diversion, and is anticipated to be completed in 1969. Construction of a second River Murray pipeline to Adelaide is scheduled to commence in 1968. This will extend for thirty miles from Murray Bridge to the River Onkaparinga to augment reservoirs on that stream. The pipeline will employ three pumping stations and have an ultimate capacity of 30,000 million gallons per year. A hydro-electric generating plant of 5 megawatt capacity will be incorporated at the point of discharge.

COUNTRY WATER SUPPLY

Early settlement was confined mainly to localities in which water supplies, considered to be permanent, were available in the form of springs, soaks or running streams. Settlement gradually extended further from the sources of supply, and many sources previously considered permanent failed under prolonged periods of drought.

Water required for domestic use and for stock was obtained from tanks excavated on the properties, wells (in areas with sub-surface water), streams and water conservation works provided by the State. The Water Conservation Act of 1886 was passed to enable the State to provide and control necessary water supplies. Works constructed or acquired under this Act comprised approximately 340 bores, 460 wells and 550 dams, tanks or rain-sheds, costing nearly \$3,000,000. These small water conservation schemes, while of immense value eventually proved to be inadequate.

Reticulated Supplies

The first large country water conservation and distribution scheme, the Beetaloo system, was completed in 1890. The Beetaloo Reservoir, ten miles east of Port Pirie, was the first of three major reservoirs in the Flinders Ranges, each interconnected and serving the farming areas of the Mid-North. The subsequent reservoirs were the Bundaleer between Gulnare and Spalding completed in 1902, and the Baroota nineteen miles north of Port Pirie completed in 1922. Nectar Brook Reservoir, serving the Port Augusta district, was completed in 1899.

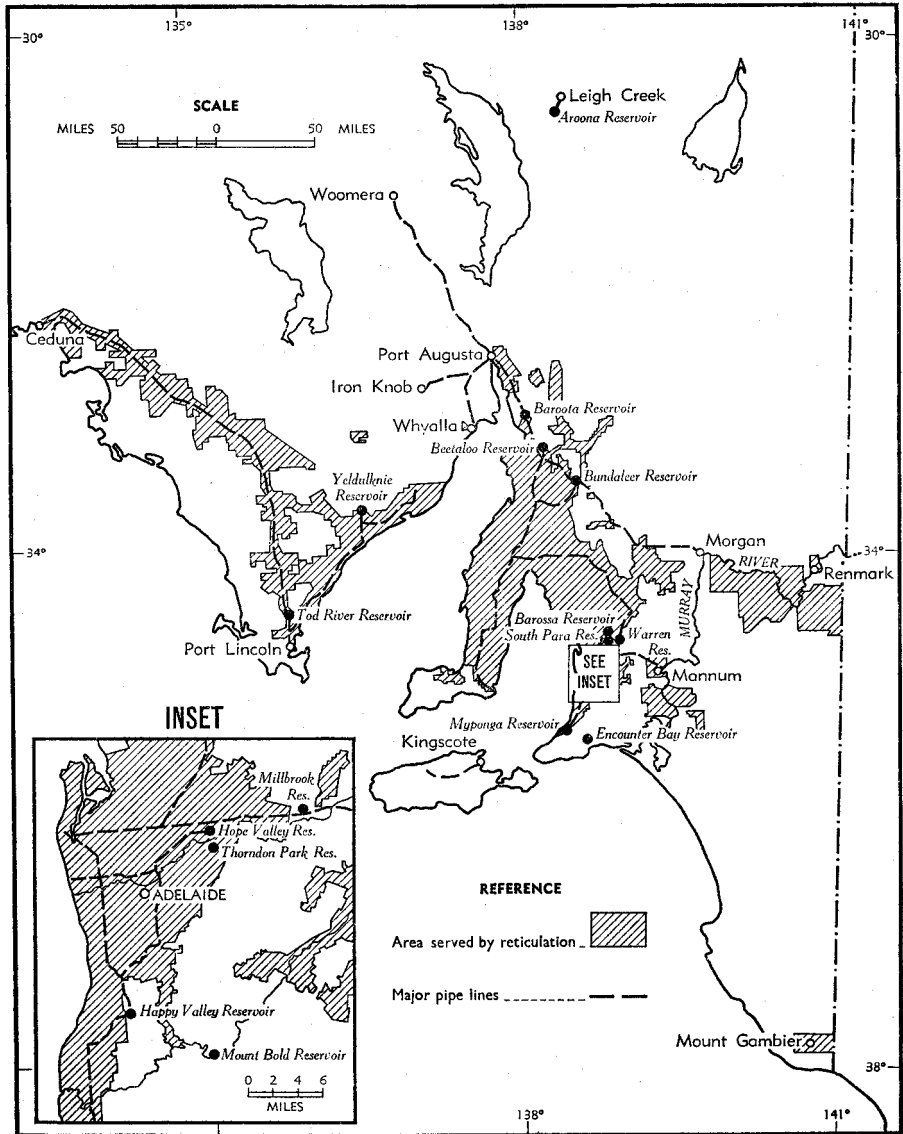
Reticulation in the Lower North began with the construction of the Barossa Reservoir on the South Para River in 1902. The Warren Reservoir, the most elevated in the State, followed in 1916, and South Para Reservoir, completed in 1958 caters for an area extending as far north as Port Wakefield. Northern development of Adelaide during recent years has encroached upon the country areas served by Barossa and South Para Reservoirs and both are now officially listed as metropolitan rather than country reservoirs.

A thirty-three mile pipeline is currently being constructed between Swan Reach and Stockwell to provide a source of River Murray water for Lower Northern areas.

Water reticulation schemes on Eyre Peninsula date from 1912 when, under the Yeldulknie Scheme, three reservoirs were constructed across intermittently flowing creeks in the hilly country west of Franklin Harbor. In 1922 a reservoir was completed on the Tod River and a pipeline to Port Lincoln, approximately seventeen miles away, connected in 1927. The Tod River Reservoir was later connected to the Yeldulknie system and since 1947 the Uley-Wanilla, Lincoln and Polda underground basins have been developed successively to provide additional sources of supply for distribution systems on Eyre Peninsula.

With the growth of Whyalla, local supply became inadequate, and in 1940 work commenced on a pipeline from the River Murray. The Morgan-Whyalla Pipeline, completed in 1944, includes four pumping stations which lift the water 1,558 feet over a distance of fifty-seven miles from Morgan to a summit storage at Hanson. From here the water gravitates 166 miles *via* Port Augusta to Whyalla.

PORTION OF SOUTH AUSTRALIA
WATER SUPPLIES



MAP 8

Branch lines have been laid to Woomera (110 miles) and other country centres. The Morgan-Whyalla Pipeline, being an additional source of supply for the Bundaleer system, has permitted reticulation over most of Yorke Peninsula. A second main was completed in 1966 and work is proceeding on pumping stations and storages which, when completed, will ultimately more than double the capacity. This main parallels the original one to Baroota Reservoir and then turns westerly to make a seven and a half mile undersea crossing of Spencer Gulf between Mambray Creek and Point Lowly.

The Encounter Bay area has been supplied from a reservoir in the Hindmarsh Valley since 1917, this supply being augmented more recently by water pumped from the River Murray at Goolwa.

Local Water Schemes

In addition to the extensive reticulated schemes there are many local water supply schemes. Mount Gambier has drawn water from the Blue Lake since 1883 and many towns have small reservoirs serving their needs. Towns along the River Murray are supplied from the river and river water is reticulated to adjacent farm lands. An eighty-six mile pipeline now being constructed between Tailem Bend and Keith will provide the means of reticulating towns and farmlands in the Upper South East.

Underground Water

Underground water-bearing areas occur in many parts of the State, and without these resources the development of extensive areas remote from surface waters would have been impracticable.

The Great Artesian Basin extends over the far northern and north-eastern portion of the State. Many bores have been sunk in this basin including several along the stock route from Birdsville in Queensland to Marree. The daily flow from approximately 160 Government bores is 13 million gallons.

In addition to the Adelaide Basin and the Uley-Wanilla, Lincoln and Poldas Basins on Eyre Peninsula other underground sources yielding considerable supplies are the Robinson Basin supplying Streaky Bay and the Murray Basin which is essential to development of the Murray Mallee country and the south-east of the State.

Major Reservoirs^(a), South Australia

At 31 December 1967

Reservoir	Capacity	Area at Full Supply Level	Catchment Area
	Acre ft	Acres	Sq Miles
South Para	41,647	1,096	88
Mount Bold	38,477	762	150
Myponga	21,763	693	48
Millbrook	13,441	440	90
Happy Valley.....	10,334	465	174
Tod River	9,196	330	76
Bundaleer	5,163	210	605
Warren	5,163	338	46

(a) All reservoirs with a capacity in excess of 5,000 acre-feet.

Water Supplies^(a), South Australia

At 30 June	Area of Works	Storage Capacity (b)	Length of Mains	Capital Cost to Date (c)
	Sq Miles	Acre ft	Miles	\$'000
1881	<i>n.a.</i>	3,986	408	1,988
1891	(d)2,167	6,825	976	3,570
1901	2,279	18,554	1,577	5,964
1911	4,383	28,079	2,793	9,096
1921	7,740	46,924	4,126	13,876
1931	18,677	62,229	6,030	26,136
1941	18,544	87,774	6,450	31,218
1951	18,701	88,244	7,203	50,380
1961	20,498	130,488	9,292	142,104
1963	20,761	166,079	9,996	175,812
1964	20,895	166,490	10,469	187,908
1965	21,132	166,512	10,774	207,612
1966	21,640	166,549	11,091	221,919
1967	21,700	166,564	11,287	235,621

(a) Controlled by Engineering and Water Supply Department and preceding State authorities.

(b) Includes Morgan-Whyalla pipeline storage tanks.

(c) Total original cost of assets.

(d) 1892.

n.a.—Not available.

Water Storage and Consumption, South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
	Acre feet					
Water storage: (capacity at end of year)						
Adelaide Metropolitan Water Supply (a)	89,570	89,596	89,623	89,268	89,303	134,619
Country Water Supply (b)	76,671	76,483	76,867	77,244	77,246	31,945
Water Consumption:						
Adelaide Metropolitan Water Supply (c)	96,433	88,786	99,658	97,926	105,481	109,900
Country Water Supply	38,330	39,885	39,546	40,726	44,006	38,813
Pumped from River Murray:						
Mannum-Adelaide pipeline ..	53,983	30,576	18,667	18,298	56,702	38,048
Morgan-Whyalla pipeline	11,680	11,764	10,309	15,180	15,450	18,343

(a) Includes Myponga reservoir and from 1966-67 South Para and Barossa reservoirs.

(b) Includes South Para and Barossa reservoirs up to 1965-66.

(c) Includes country areas supplied directly from the Mannum-Adelaide pipeline, the Myponga reservoir and Adelaide metropolitan distribution system which was extended during 1966-67.

WATER RATES AND CHARGES

Annual water rates are levied on all properties served from or abutting a water main except in a few isolated cases where supply by measure is given to properties outside of proclaimed Water Districts. Payment of rates permits the use of a quantity of water without further charge. This quantity, termed the rebate allowance, is determined by dividing the rate by the current price of rebate water. Water used in excess of the allowance is charged for by measure at the current price of excess water.

Two systems of rating are employed. In both cases scales of rates and prices of rebate and excess water vary in different districts, according to costs of construction and operation, and are subject to review from year to year.

In city and township water districts, rates are calculated on assessed annual property values which may be three-fourths of the gross annual rental value or five per cent of the capital value of the fee simple. The present scale of rates at Adelaide and the majority of country towns is $7\frac{1}{2}$ per cent per annum up to the assessed annual value of \$800 and 5 per cent on the assessed annual value above \$800, with a minimum annual charge of \$8. The current price of both rebate water and excess water at Adelaide is thirty cents per thousand gallons.

Farmlands within certain proclaimed Country Lands Water Districts are rated on the area of land which is within one mile of a water main at a rate per acre based on unimproved land values. Current Country Lands rates vary from \$4.80 per hundred acres on land valued at \$2.00 per acre in the lowest rated district up to \$57.00 per hundred acres on land valued at \$24.00 or more per acre in the highest rated district. A minimum rate of \$8.00 is levied in most districts.

Services from mains to property boundaries are installed and maintained by the Engineering and Water Supply Department. Connection fees are uniform throughout the State and are currently \$38.00 for a half inch service and \$42.00 for a three-quarter inch service, with commensurately higher fees for larger services.

SEWERAGE

ADMINISTRATION

Sewerage of cities and towns in South Australia is undertaken by the State Government under the authority of the Sewerage Act, 1929-1967. The Act is administered by the Engineering and Water Supply Department for the Minister of Works and provides for waterborne sanitary sewerage schemes within proclaimed drainage areas. As a general rule the Government sewerage schemes are provided only in densely populated cities and towns where they are essential for public health reasons or in areas where it is necessary to protect surface or underground water resources from pollution by domestic or industrial wastes.

Local Government authorities are empowered under the Local Government Act 1934-1967 to provide sanitary drainage schemes and in recent years numbers of these authorities have installed common septic tank effluent drainage schemes discharging to filters or oxidation ponds. A Drainage Co-ordinating Committee comprising an independent chairman and representatives of the Engineering and Water Supply and Public Health Departments has been established by the Government to provide guidance to local authorities and co-ordinate their planning with the State authority.

METROPOLITAN SEWERAGE

Sewerage for Adelaide was first authorised by an Act of Parliament in 1878. Construction began in 1879 and by 1881 sewage from the city and inner suburbs was admitted to a sewage farm at Islington. Since then continual expansion of sewerage systems has kept pace with development of the metropolitan area as far as physical and financial factors permit and Adelaide is now the most completely sewered of the capital cities.

The proclaimed Adelaide Drainage Area at present serves an estimated population of 750,000 persons and covers 184 square miles of the Adelaide Plains between Darlington and Elizabeth and a segment of southern development around Christies Beach. Trunk extensions to serve the Gawler area and

additional southern areas are planned for the near future. Subdivision developers are required to make capital contributions towards the cost of sewer and water extensions for all new allotments in areas capable of being served within the Drainage Area.

Four major sewerage systems are employed, each draining to separate sewage treatment works at Bolivar, Glenelg, Port Adelaide and Christies Beach. Islington Sewage Farm was abandoned in 1966 when the Bolivar Treatment Works were put into service. These works are still under construction and scheduled for completion in 1968. The Christies Beach works are temporary and will be replaced by permanent works to serve a larger area of the south coast in the near future. Some additional small temporary treatment works are being installed in the Reynella-Morphett Vale area pending completion of the main Christies Beach Treatment Works and extension of trunk sewers.

A few common effluent drainage systems have been installed in fringe areas by local government authorities and some of these have been, or are planned to be connected to the sewerage systems. A *per capita* charge is levied against local government authorities whose common effluent drainage systems discharge to sewer mains.

The next table shows details of metropolitan sewers for the last five years.

Metropolitan Sewers, South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
Adelaide Drainage Area (square miles)	154	159	161	179	184
Length of sewers (miles)	1,714	1,774	1,854	1,952	2,039
Number of connections	186,143	194,889	204,128	213,375	220,799
	\$'000				
Revenue:					
Rates	4,565	5,121	5,418	6,258	6,723
Other	124	118	94	127	81
Total	4,689	5,239	5,513	6,386	6,804
Expenditure:					
Working Expenses	2,002	2,201	2,363	2,614	2,880
Interest	1,151	1,265	1,380	1,561	2,195
Total	3,153	3,466	3,743	4,175	5,075
Surplus	1,536	1,774	1,769	2,211	1,729
Capital Cost to Date (a)	35,841	41,707	50,209	59,729	69,836

(a) Total capital funds provided from State revenue and loan funds, Commonwealth Government Grants and other sources.

COUNTRY SEWERAGE

At 30 June 1967 the drainage area of country sewerage schemes constructed and operated by the Engineering and Water Supply Department totalled 237 square miles; the length of sewers laid was 181 miles and the number of connections totalled 7,814. Capital cost to this date amounted to \$10,155,000.

Sewerage schemes are located at Angaston, Gumeracha, Lobethal, Myponga, Mount Gambier, Naracoorte, Port Lincoln and Whyalla.

Construction of the Whyalla Sewerage System is still in progress and the construction of schemes at Mannum and Millicent has commenced. In 1966-67, thirty-six miles of sewers and 3,188 new connections were laid in country drainage areas. In addition, the Engineering and Water Supply Department

has constructed schemes at Mount Burr and Nangwarry townships for the Woods and Forests Department and numerous schemes to serve country hospitals, institutions, etc. operated by other authorities.

Common effluent drainage schemes have been installed by local government authorities at Ardrossan, Berri, Bute, Clare, Cleve, Cobdogla, Echunga, Eudunda, Lock, Lyndoch, Mount Pleasant, Port Augusta, Port Elliot, Parilla, Riverton, Tintinara and Waikerie and a scheme at Renmark is under construction.

SEWER RATES AND CHARGES

The Engineering and Water Supply Department provides sewer connections to property boundaries but internal drainage systems which are the responsibility of landholders must conform to regulations under the Sewerage Act and must be installed by authorised plumbers. Standard fees for sewer connections are \$75 and \$100 for 4-inch and 6-inch sizes respectively.

Sewer rates are levied on properties connected to or abutting a sewer, with a minimum annual charge of \$8. Current scales of rates in the Adelaide Drainage Area vary from 6½ per cent to 10 per cent of assessed annual property values; the higher rates being charged in Sub Areas where costs of construction or operation are abnormal.

Country charges for sewer connections are the same as for the metropolitan area. Current sewer rates in all country towns are 10 per cent of assessed annual property values, with a minimum annual charge of \$8.

Rates levied by local government authorities on properties connected to common effluent schemes are usually proportionate to the costs and interest charges involved in the schemes.

8.2 IRRIGATION AND DRAINAGE

IRRIGATION

The development of irrigation areas in South Australia has been carried out by both Government authorities and private interests. Since 1930 the controlling authority for Government irrigation areas has been the Department of Lands with the Engineering and Water Supply Department the constructing authority for the Minister of Irrigation.

Irrigation areas are confined almost exclusively to the Murray Valley and can be classified into two groups; highland areas requiring the pumping of water, and reclaimed lands watered by gravitation. Details of the production of these areas are given in Part 9, pages 336-7.

Highland Areas

With the major exception of the Mypolonga Irrigation Area, highland irrigation is located in the hot and dry zone along the River Murray between Morgan and the Victorian border.

Large scale irrigation dates from the Chaffey Bros Irrigation Works Act of 1887. The two Chaffey brothers had come from America to assist in irrigation development and undertook to establish irrigation works at Renmark in return for certain land concessions. With the departure of the Chaffeys in 1893 the Renmark Irrigation Trust was formed. This trust administered the Renmark Irrigation Area as a local governing body until 1960, when it became responsible solely for irrigation matters.

Attempts by the Government to alleviate unemployment during 1894 by the formation along the River Murray of villages run on community lines was unsuccessful and in 1899 a system of independent holdings with a co-operative water supply was substituted. Only the Lyrup Village Association remains today.

The preparation of irrigated land for fruitgrowing was first undertaken by the Government in 1909. Steady progress with development and settlement continued until 1918 when the Government adopted a policy that all future allotments were to be reserved for returned soldiers, which accelerated development. However, following a heavy decline in prices, development ceased in 1923 and it was not until the end of the 1939-45 War that the area under irrigation showed any marked increase. Here again development was stimulated by the need to rehabilitate ex-service personnel, and between 1946 and 1954, approximately 8,000 acres of irrigable land were developed under the War Service Land Settlement Scheme, the largest settlement being at Loxton (approximately 6,500 acres). Since 1954 there has been no further large-scale development by the Government, and the authorities have been devoting their attention to the maintenance and improvement of existing schemes and in particular to the complete electrification of pumping plants.

A number of private schemes have also been developed in the post-war period.

Highland areas are largely devoted to vineyards and citrus and stone fruit orchards which are irrigated by water pumped from the river in open concrete-lined channels or pipes. Many of the recently developed areas use a system of sprays for watering the blocks in preference to the traditional surface reticulation. Sprays are also being used to increase the acreage in a number of the older areas by bringing in land too high for reticulated watering. Landholders pay an annual rate for routine irrigation and a charge is made for additional water, except at Loxton and Cooltong where water is supplied on a measurement basis.

Irrigation systems must also provide for the removal of surplus water which accumulates beneath the surface of the land. Blocks have internal drainage systems leading initially to shafts and bores, and later, when these become inoperative, to comprehensive drainage systems which convey the water to evaporation basins.

Reclaimed Areas

On the lower Murray between Mannum and Wellington is a series of swamp and overflow areas which have been reclaimed by Government and private agencies.

The first such reclamation was made in 1881 by Sir W. F. D. Jervois, then Governor of the State, and was followed by other large holdings being reclaimed by private enterprise. This successful conversion of almost waste land to highly productive areas led, in 1904, to the inclusion of the reclamation and subdivision of the remaining swamp areas in the State's policy of land settlement. In 1929 most of the areas which were suitable for settlement and which were not being developed privately had been reclaimed and settled.

Although these reclaimed areas contain some orchards, vineyards, and market gardens they are devoted principally to the growing of green fodder for dairy herds and sheep flocks. These lands are watered by gravitation and surplus water is run into main drains from which it is pumped into the river. Approximately 950 acres of highlands adjacent to reclaimed areas have also been developed for the production of fodder crops through the use of spray irrigation.

Irrigation Areas, South Australia

Area Irrigated	1963-64	1964-65	1965-66	1966-67
	Acres			
Government controlled :				
War Service schemes (1939-45 War)	8,068	8,080	8,083	8,067
Other	30,508	30,715	30,919	30,968
Non-Government (a):				
Border-Mannum;				
Trusts, boards and association				
areas	10,881	10,889	10,912	10,912
Private schemes	17,899	19,935	22,567	24,711

(a) Details are not available for areas below Mannum on the River Murray.

Further details of the 39,035 acres irrigated in Government-controlled schemes in the year 1966-67 are as follows:

Area Irrigated	Highland Areas		Reclaimed Areas	Total
	Surface Reticulation	Spray Irrigation		
	Acres			
War Service schemes (1939-45 War)	4,068	3,999	—	8,067
Other	18,865	3,142	8,961	30,968
Total	22,933	7,141	8,961	39,035

THE RIVER MURRAY AGREEMENT

In the earlier years there were great variations in the flows of the River Murray and its tributaries resulting from extremely variable rainfall in the catchment areas. The resulting droughts and floods were a considerable impediment to the proper functioning of the irrigation areas.

In 1915 the Commonwealth River Murray Waters Act was passed ratifying and providing for the carrying out of an agreement entered into between the Parliaments of the Commonwealth and the States of New South Wales, Victoria and South Australia. The River Murray Agreement provided for the construction of works and for the allocation of water between the three States concerned. Subsequently, in 1935, State legislation was enacted to give effect to the agreements entered into between the Commonwealth and the States of New South Wales, Victoria and South Australia vesting the construction and control of River Murray works in the River Murray Commission and fixing a method of contributing to the costs and expenses of those works.

Works, to regulate the flow and control of the level of the River Murray, have included the construction of a number of storage areas and the erection of a series of locks and weirs. By 1928 Lake Victoria, in New South Wales adjacent to the South Australian border, had been converted into a large storage area supplying water for the South Australian irrigation settlements. The major storage area, the Hume Reservoir above Albury, was completed in 1936. Further works, the last being completed in 1961, have doubled the original capacity to 2.5 million acre-feet. Except for that held in various lock pools, no

water from the Murray is stored in South Australia. However, in 1962 agreement was reached for the construction of a reservoir of approximately 5 million acre-feet and covering 503 square miles with its dam at Chowilla, just inside the State border. Tenders were received during 1967 for the embankment, spillway and lock features which were considerably in excess of the original estimate. Since 30 June 1967 work on the project has been suspended pending further review by the River Murray Commission and the Governments concerned into the cost structure and certain technical problems which have arisen.

Between 1922 and 1930 six locks and weirs were erected between Blanchetown and the Victorian border. In addition five barrages have been placed at the Murray mouth to prevent the ingress of salt water from the sea and to maintain a higher level in the River for the use of the reclaimed areas. These barrages were completed in 1940. During 1966-67, 320,708 acre-feet of water were diverted from the River Murray in South Australia for irrigation purposes.

DRAINAGE

With the exception of the reclaimed areas along the lower Murray, already discussed in the previous section, and certain works associated with metropolitan development, drainage schemes in South Australia are confined to the south-east corner of the State. The topography of this area reveals a series of fertile valleys or flats interspersed by low infertile ranges running parallel to the sea and thus preventing the natural drainage of the land. In consequence considerable sums of money have been expended in constructing drainage schemes to reclaim these areas.

The first major drainage scheme was commenced in 1863 and completed in 1885. This scheme, the Millicent Drainage System, reclaimed 100,000 acres of land at a cost of \$300,000, this cost subsequently being included in the land allotment price. This system is maintained by the Millicent Drainage Trust from rates levied on landholders.

Following this early success the Government undertook the construction of further drains during the next sixty years. These drains were constructed under three sets of conditions: *National Drains* were constructed at Government expense, the cost being absorbed in the price of the land when sold; *Petition Drains* were constructed on requests from landholders who agreed to repay the full cost to the Government over a period of forty-two years; *Scheme Act Drains*, commenced in 1908, provided for the Government and the landholders to share the cost, the landholders share being repayable over forty-two years. After the Scheme Act Drains had been completed it was found that the cost exceeded the benefit derived, and subsequently, following a royal commission, the landholders' liability was reduced.

Legislation in 1948 marked a new stage in the development of South-Eastern drainage. Previously attention had been devoted to the construction of a system of drains removing large quantities of water from general areas and providing above all for the rapid removal of floodwaters. By 1948, 430 miles of drains had been constructed at a capital cost of \$1,441,752. However in 1948, with the establishment of the Western Division Drainage Scheme, emphasis was placed on a complete drainage programme as achieved by the earlier Millicent scheme. The Western Division Drainage Scheme, which aimed at the comprehensive drainage of 400,000 acres of land between the Millicent and Kingston districts, has now, with the exception of some minor work in the northern region, been completed.

In 1960 the Eastern Division Drainage Scheme, for the drainage of 727,000 acres of flats lying between Kalangadoo and forty miles north of Lucindale, was commenced and construction on this scheme is still progressing.

Under the schemes introduced since 1948 landholders are required to repay an amount based on a 'betterment assessment' of their property. As in the other schemes this amount can be repaid over forty-two years.

At 30 June 1967, 835 miles of drains (excluding the Millicent scheme) had been constructed at a capital cost of \$17,128,300. These drains vary considerably in size from only a few feet to over 200 feet bottom width.

In addition to new construction, continual attention must be paid to the prevention of silting and of weed growth and to the upkeep of over 500 bridges; rates being levied on landholders to meet the costs of such maintenance. The closer settlement resulting from the drainage schemes has, in many areas, necessitated the construction of new bridges.

The system is administered by the South-Eastern Drainage Board under the South-Eastern Drainage Act, 1931-1959.

8.3 ROADS

Roads in South Australia are officially classified as either main roads, being those proclaimed as such under the provisions of the Highways Act, or district roads.

Main and district roads within local government areas are vested in the various local governing authorities who primarily are responsible for construction and maintenance works within their respective areas. However, there is provision in the Highways Act for the Commissioner of Highways to construct, reconstruct, and maintain important roads after due notice has been given, and in practice most of the roads carrying heavy traffic are constructed and maintained by the Highways and Local Government Department.

In areas outside the control of local government authorities road works are carried out by State Government departments. Until July 1961 almost all of this work was performed by the Engineering and Water Supply Department, using equipment already in those areas, but the Highways and Local Government Department now constructs and maintains roads in the Western Division including the Eyre Highway to the Western Australian border.

Funds used for road works in South Australia are derived from three main sources, viz the net proceeds of fees imposed by the State Government for the registration of motor vehicles and the licensing of drivers, grants from the Commonwealth Government, and rates levied by local government authorities.

Commonwealth legislation stipulates that not less than 40 per cent of the Commonwealth aid roads grants shall be expended on roads in rural areas other than highways, main roads and trunk roads. State funds also are made available to local government authorities for construction and maintenance works generally and particularly for work on the more important district roads. In approved cases the Highways and Local Government Department assists by way of interest-free loans the purchase, by local authorities, of road-making equipment. Some local government authorities, having adequate resources of manpower and equipment, undertake specific works on behalf of, and financed by, the Highways and Local Government Department. The department provides technical advice when requested by a local government authority.

The following table shows the length of main and district roads according to type of surface at 30 June 1967 as advised by the Highways and Local Government Department.

Main and District Roads: Type of Surface, South Australia

At 30 June 1967

Type of Surface	Main Roads	District Roads	Total
	Miles		
Bitumen or concrete.....	4,333	3,887	8,220
Gravel or crushed stone	3,474	12,284	15,758
Formed only	331	10,184	10,515
Unformed	55	40,498	40,553
Total	8,193	66,853	75,046

The unformed roads shown above include tracks in localities outside of local government areas, mainly routes to and between station homesteads and not on land reserved for roads.

In closely settled areas, particularly in the metropolitan area and country towns, most roads are surfaced with bituminous concrete or by bituminous penetration of a macadam base. In rural districts where traffic is light roads may be formed of natural materials or be only lightly gravelled but the more important country roads are constructed of gravel or crushed rock and are improved, as traffic warrants, by the addition of a bituminous seal.

Since the 1939-45 War the tremendous increase in road traffic has necessitated the reconstruction and widening of many major roads, particularly those in and near the metropolitan area of Adelaide. Major examples of this type of work are the main south-east road from Glen Osmond to Crafers, completed several years ago, the Main North Road to Gawler and the main South Road. In addition to this work and extensive road construction in new housing areas many country roads have been greatly improved.

A detailed historical survey was included on pages 257-9 of the *South Australian Year Book* 1966.

FUTURE DEVELOPMENT

The Town Planning Committee of South Australia, appointed by Parliament in 1955, presented its report in 1962 covering various aspects of the anticipated development of metropolitan Adelaide to the year 1991. The report contained alternative proposals but favoured the improvement of public road and rail transport and the construction of a limited number of freeways to relieve congestion on existing major roads by catering for a large volume of fast 'through' traffic including express buses.

Freeways are roads without frontage access and with cross traffic carried under or over the through traffic by means of bridges. Access to such roads is permitted only at 'interchanges'.

The committee recommended the following six freeways totalling slightly less than 100 miles:

- (1) Central North-South Freeway from Gawler to the Yankalilla road east of Maslin Beach.
- (2) Freeway around the city of Adelaide.
- (3) City of Adelaide to Port Adelaide.
- (4) City of Adelaide to Modbury.
- (5) Modbury to Port Adelaide.
- (6) Crafers to Bridgewater.

The freeway from Crafers to Bridgewater is under construction and is expected to be completed by 1969. This road will link with the existing four-lane highway from Glen Osmond to Crafers and form portion of the highway to Melbourne. Although the exact routes of other freeways have not been determined the Highways Commissioner is acquiring land along some probable routes where such action is necessary to prevent development which might make the subsequent construction of freeways economically impracticable.

The extent and exact routing of future freeways will be largely dependent upon the findings of a Metropolitan Adelaide Transportation Study, for the planning and conduct of which the South Australian Government has established a Joint Steering Committee. The study, under the direction of expert consultants, began in 1964 and was completed with the submission of its report to Parliament early in 1968. The purpose of the study was the co-ordination of the plans and activities of various authorities to secure the integrated development of transport facilities for the metropolitan area. Authorities represented on the committee were the Highways Department, the State Planning Office, Adelaide City Council, Municipal Tramways Trust, and South Australian Railways.

Other studies have indicated that road traffic is increasing at an approximate rate of 7 per cent per year which is roughly equivalent to a 100 per cent increase during a ten-year period. The Commissioner of Highways estimated that to meet fully the requirements of increasing traffic, the following works would be necessary from 1964 to 1974.

Construction of freeways	35 miles
Duplication of pavements	140 miles
Reconstruction and improvement of existing sealed pavement	4,100 miles
Extension of bituminous surfacing	4,750 miles
Metalling or gravelling formed roads	9,000 miles
Clearing and forming of roads	12,000 miles
Construction of new and replacement bridges	190 units

These figures represent an assessment of 'needs'. They do not constitute a programme of works, for this will be conditioned by the findings of the Transportation Study as well as by the availability of finance, materials, manpower and equipment. During 1968 a new assessment is being made, in conjunction with the Commonwealth Bureau of Roads, of road 'needs' for the ten years 1969 to 1979.

RESEARCH

Because of the great area of South Australia climatic and soil conditions vary enormously, particularly from north to south. Special sections of the Highways and Local Government Department are engaged in constant investigation and testing of soils, materials, and construction methods to ensure that a high standard of road construction is maintained and that methods are adapted to the needs of particular areas.

South Australia contributes to Australian road development through its active participation in the National Association of Australian State Road Authorities. Specialist committees of the association deal with bridge design, materials research, traffic engineering, bituminous pavements, plants and equipment, and advance planning. The association in 1960 established the Australian Road Research Board whose functions include the co-ordination and organisation of road research.

ROAD FINANCE

As indicated earlier, the three main sources of road finance are:

- (1) State motor vehicle taxation and drivers licence fees.
- (2) Commonwealth grants.
- (3) Property rates and other levies imposed by municipal and district councils.

Finance received from the first two sources is controlled by the Commissioner of Highways. The Highways Act provides that fees received for vehicle registrations and drivers' licences, less cost of collection, should be credited to the Highways Fund. The fund is credited also with hawkers licence fees collected under the Hawkers Act, 1934-1960; interest on and repayments of advances made to local government authorities for roadworks and drainage schemes and for the purchase of machinery; special contributions from the Municipal Tramways Trust under the Highways Act; contributions from local government authorities towards the cost of lighting Anzac Highway and Port Road; Road Maintenance (Contribution) Act charges and other minor sundry receipts.

Highways and Local Government Department, South Australia *Receipts and Payments*

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
RECEIPTS (\$'000)					
Motor vehicle registrations, licences, fees, fines, etc.	9,074	9,978	10,729	11,204	11,504
Road Maintenance Charges	—	—	1,426	1,903	2,070
Commonwealth Aid Roads Grants					
For rural roads	5,546	7,272	6,988	6,611	7,603
For other roads	6,854	6,066	7,915	9,413	9,620
Loans from State Government	580	950	—	—	—
Repayments of, and interest on, advances to local authorities	922	991	1,144	1,293	1,263
Other	244	219	216	146	165
Total	23,220	25,476	28,417	30,570	32,225
PAYMENTS (\$'000)					
Construction and reconstruction of roads, bridges, etc.	15,358	19,517	18,339	20,912	22,834
Maintenance of roads, bridges, etc.	4,976	5,583	5,277	5,375	6,000
Interest, debt redemption, etc.	486	512	1,164	1,167	514
Advances to local authorities	1,162	1,650	1,126	1,376	1,091
Net purchases of land, buildings, plant, equipment, materials, etc.	Cr.218	801	1,080	902	1,536
Other (a)	74	Cr.263	Cr.92	312	(b)1,256
Total	21,837	27,801	26,895	30,044	33,231

(a) This item includes provision for leave and for plant overhauls which may be a negative figure in some years.

(b) Includes \$1,000,000 representing repayment to revenue under Section 31 (a) of the Highways Act.

The Local Government Act provides for grants-in-aid to be paid from the Highways Fund to local government authorities for expenditure on roads, other than main roads, and related works.

From 1923 to 1930 Commonwealth road grants were conditional upon *pro rata* expenditure by the States and work was subject to Commonwealth inspection. From 1931 to 1958 the total amount of Commonwealth aid road grants to the States was determined as a proportion, varied from time to time, of Commonwealth petrol taxation. From 1959 these grants have borne no direct relationship to any particular item of revenue. For conditions and details of the method of dividing total Commonwealth road grants between the States from 1923 to 1963-64 reference should be made to *Commonwealth Year Book* No. 38 pp. 787-8, No. 41 p. 621, No. 46 p. 838 and No. 49 p. 934.

Proposed Commonwealth aid roads grants for the five years commencing in July 1964 were announced in March 1964. During the five year period South Australia is likely to receive slightly more than \$86,000,000, or approximately 11.5 per cent of the total grants which will be distributed as follows: 5 per cent to Tasmania and the remaining 95 per cent to the mainland States; one-third according to population, one-third according to area and one-third proportionately to the number of motor vehicles registered. Portion of the grants is subject to matching expenditure by the States.

Exact figures are not available for total expenditure in South Australia on the construction, reconstruction, and maintenance of roads, streets, bridges, ferries, and associated works: during the last five years approximate total expenditure by State and local government authorities has been: 1962-63, \$35 million; 1963-64, \$40 million; 1964-65, \$40 million; 1965-66, \$39 million; and 1966-67, \$47 million. These figures include the cost of land purchased for new roads including future freeways and for road widening, and charges for depreciation of plant and machinery. Local government figures used to derive the totals include expenditure which is subsequently recouped from the public and expenditure on footpath maintenance and stormwater drainage.

The greatest deficiency in total figures is the cost of work carried out under the provisions of the Town Planning Act which requires persons and authorities (including the South Australian Housing Trust) who subdivide land for housing to provide roads to a certain specification. The actual work is sometimes performed by local government authorities at the expense of the subdividers: in such cases the costs of construction are included in the figures above, but when such roads are constructed by private contractors or by direct employees of the subdivider few details are available.

8.4 RAILWAYS

OWNERSHIP AND CONTROL

Both the State and Commonwealth Governments operate railway systems in South Australia.

In 1851 a 'Board of Undertakers' was appointed in connection with the construction of the Adelaide to Port Adelaide railway. In 1856 a Board of Railway Commissioners was appointed to control South Australian railway operations. This Board was abolished in 1859 and from then until 1887 control was vested in the Commissioner of Public Works. The South Australian Railways Commissioners Act of 1887 gave almost complete authority for management and

administration to three Railways Commissioners, reserving (as in the past) financial control to Parliament. The powers of the three Commissioners passed to one Commissioner in 1892. Many of the provisions of the 1887 Act, including those for financial control, have been incorporated in the present South Australian Railways Commissioners Act, 1936-1965, under which the Commissioner is appointed for a period of seven years.

Management of all Commonwealth Railways is vested in a Commonwealth Railways Commissioner.

In South Australia the only private railways open to general traffic are the lines owned by the Broken Hill Proprietary Co. Ltd, from Iron Knob and Iron Baron to Whyalla (fifty-one miles) used for the carriage of iron ore and from Coffin Bay to Port Lincoln (twenty-five miles) used for the carriage of limestone. The construction of the latter line was completed in early 1967.

HISTORICAL SUMMARY

Much of the basic work of establishing the railway network which serves South Australia was concentrated in two comparatively brief periods, from about 1877 to 1887 when approximately 1,200 miles of lines were constructed, and from 1910 to 1917 when about 1,500 miles were added. Before 1877 a number of scattered lines totalling roughly 300 miles had been constructed.

During the eleven years to 1887 rail communication with the eastern States was established, the rich ore deposits at Broken Hill were tapped, a line was built through northern pastoral areas toward the Northern Territory, and railways from outports to their hinterlands (predominantly agricultural but more pastoral in the South East) were extended and linked with arterial services centred on Adelaide. During the following twenty-two years only 200 miles of new lines were opened. Then in an eight-year period railways were constructed to facilitate the agricultural development of Eyre Peninsula and the Murray Mallee lands, and the Commonwealth Railways built a line to Western Australia.

Since 1917 route mileage open has increased by about 600 miles only. The emphasis during recent years has been upon conversion of 3 feet 6 inch lines either direct to 4 feet 8½ inch or to 5 feet 3 inch as an interim to possible ultimate conversion to the standard gauge.

Only a small portion of the Adelaide metropolitan area is served by railways. The main trunk routes pass through northern and southern suburbs; the line to Willunga, although closed to passenger traffic beyond Hallett Cove, serves south-western suburbs; the Port Adelaide line, its extensions to Semaphore and Outer Harbor, the branch line to Grange, and spur lines to industrial establishments provide better coverage in north-western suburbs than is achieved elsewhere in Adelaide. For many years two railways linked Adelaide and Glenelg: in 1929 the route *via* North Terrace and Richmond was closed and the South Terrace route was converted to its present use as a tramway.

A more detailed historical survey was included on page 263 of the *South Australian Year Book* 1966.

Lines operated by the Commonwealth Government in South Australia at 30 June 1967 were: 3 feet 6 inch gauge; Stirling North to Hawker, 61 miles, and Marree to the Central Australian Border, 364 miles, and 4 feet 8½ inch gauge; Port Pirie Junction to Western Australian Border, 653 miles, and Stirling North to Marree, 217 miles.

The table which follows shows route mileage of railways open for traffic for every tenth year from 1856.

State and Commonwealth Government Railways

Gauges, Route-mileage open in South Australia

Date	5ft 3in Gauge	4ft 8½in Gauge	3ft 6in Gauge	Total (a)
31 December				
1856.....	7	—	—	7
1866.....	56	—	—	56
1876.....	133	—	137	270
1886.....	495	—	716	1,211
1896.....	493	—	1,229	1,722
1906.....	594	—	1,238	1,832
30 June				
1916.....	977	361	1,688	3,026
1926.....	1,238	598	1,739	3,575
1936.....	1,451	598	1,676	3,725
1946.....	1,480	654	1,665	3,799
1956.....	1,622	654	1,540	3,816
1963.....	1,676	871	1,291	3,838
1964.....	1,655	871	1,291	3,817
1965.....	1,649	871	1,272	3,792
1966.....	1,649	871	1,256	3,776
1967.....	1,651	871	1,254	3,776

(a) Excluding private railways.

Mileage of the Goolwa-Port Elliot line which was completed in 1854, and its extensions to Victor Harbor (1864) and Strathalbyn (1869) has been excluded from the above table for years prior to 1884-85, when the route was converted from horse to locomotive traction.

STANDARDISATION OF RAIL GAUGES

The existence in South Australia of 3 feet 6 inch, 4 feet 8½ inch, and 5 feet 3 inch systems has already been noted.

For many years railway administrators have been greatly concerned about the increased costs and decreased efficiency associated with the transshipment of goods and passengers and with the provision, maintenance and operation of different sets of rolling stock. During recent years with the rapid development of road and air transport facilities there has been increasing pressure for standardisation of rail gauges in the interests of efficiency and economy of operation of transport services as a whole.

In 1946 an agreement was signed between the Commonwealth Government and the States of N.S.W., Victoria, and South Australia regarding the standardisation of railway gauges in their respective States. This agreement was subsequently ratified by the Governments of the Commonwealth, Victoria and South Australia but not by the N.S.W. Government. After some time had elapsed and New South Wales had failed to ratify the agreement, the Commonwealth Government decided to enter into a separate agreement with South Australia and the necessary legislation was enacted in 1949 by each Government concerned.

It was agreed that the whole of the South Australian Railways system, except the 3 feet 6 inch gauge lines on Eyre Peninsula, be converted to the standard 4 feet 8½ inch gauge and the Commonwealth would provide a standard gauge

railway from Port Augusta to Darwin. The Commonwealth agreed to meet the full cost of work on Commonwealth Railways and to provide all finance (of which South Australia must repay 30 per cent over a period of years) for the conversion of State railways. By an amendment to this agreement the conversion of the South-East system from 3 feet 6 inch to 5 feet 3 inch completed in 1959 at a cost of \$10 million was accepted as an interim to final conversion to 4 feet 8½ inch. Lines from Beachport to Millicent and Wandilo to Glencoe were closed in 1956 and 1957 respectively as traffic did not justify conversion.

As part of the agreement and at a cost of \$24.4 million, the Commonwealth has built a 4 feet 8½ inch line from Stirling North to Marree to replace that portion of the old railway to Alice Springs. From Stirling North to Brachina this standard gauge line follows a new route; the old railway has been closed from Hawker to Brachina but from Stirling North through Quorn to Hawker, still as a Commonwealth line, it remains open but not for general traffic.

In March 1956 a committee of members of the Federal Parliament was formed to consider whether it was desirable to confine standardisation to the main trunk routes. In October 1956 the committee recommended that 4 feet 8½ inch lines be provided from Wodonga on the Victorian-N.S.W. border to Melbourne, from Broken Hill to Adelaide *via* Port Pirie, and from Kalgoorlie to Fremantle. Conversion of the Victorian line for dual gauge operation (both 5 feet 3 inch and 4 feet 8½ inch) was completed in 1962 and in that year work commenced on the Western Australian sections.

During 1966-67 further progress was made with planning and construction of the standard gauge railway works between Kalgoorlie-Kwinana in Western Australia. With the progress achieved to date it is anticipated that the standard gauge link between Fremantle and Sydney (*via* Broken Hill) will become a reality towards the end of 1969. Contracts exceeding \$7 million were let during 1967 for the construction of passenger rolling stock for the through Sydney-Perth standard gauge link. The Perth-Kalgoorlie section is expected to be completed by mid-1969.

In 1963 the Commonwealth Government decided to proceed with the standardisation of the Port Pirie-Broken Hill railway as part of the 1949 agreement. At 30 June 1967 one hundred and thirty-seven miles of track between Cockburn and Port Pirie had been laid as well as five miles of broad gauge track between Terowie and Peterborough, and work was proceeding towards a target of completion by December 1968. Of the major station yards, work is in hand at Peterborough and Port Pirie while at a number of the smaller stations all work preparatory to final conversion is complete.

During 1967 agreement was reached between the Commonwealth, New South Wales and South Australia to link Cockburn and Broken Hill along a new line of thirty miles instead of converting to the standard gauge the existing thirty-five miles owned and operated by the Silverton Tramway Company. The new line will be owned and operated by the South Australian Railways and is expected to be completed in the latter half of 1969.

Specific Commonwealth approval is necessary before any standardisation work can be commenced under existing agreements. No such approval has been announced for works in South Australia other than those mentioned above. During 1966-67 the Commonwealth Railways Commissioner submitted a report to the Commonwealth Government on a proposal to convert to standard gauge the line between Port Pirie and Adelaide. To date no announcement has been made on this proposal.

8.5 HARBORS AND AERODROMES

HARBORS

The State of South Australia has a coastline more than 2,400 miles in length including Kangaroo Island; the eastern portion of the mainland has three great indentations—Encounter Bay, Gulf St Vincent, and Spencer Gulf. Although the gulfs were a barrier to transport overland, especially to Eyre Peninsula, they offered many harbors for shipping and it was by this means that early settlers were able to receive their supplies and send their products to market.

Although there are many seaports in South Australia, at present only twenty-seven are classified as actively engaged in meeting the requirements of shipping interests. Of these twenty-seven harbors, nineteen have State-owned wharves or jetties and eight have privately-owned wharves or jetties.

The Broken Hill Pty Co. Ltd owns and operates bulk handling facilities, etc. at Ardrossan, Rapid Bay, Whyalla, Port Lincoln and Proper Bay, and the Broken Hill Associated Smelters Pty Ltd a jetty at Wardang Island, whilst the Colonial Sugar Refining Co. Ltd owns and operates a bulk loading installation at Ballast Head, Kangaroo Island. The Commonwealth Railways operates the wharf at Port Augusta on behalf of the Commonwealth Government, and the Port Stanvac oil terminal, which commenced operations in December 1962, is owned by Petroleum Refineries (Aust.) Pty Ltd. The State also maintains jetties or wharves for promenade and fishing purposes at forty-nine ports no longer used by commercial shipping. A total of nine jetties are leased to district councils.

There are five deep-sea ports operated by the State, *viz* Port Adelaide, Port Pirie, Port Lincoln, Thevenard, and Wallaroo, whilst overseas vessels are also accommodated at Whyalla and Ardrossan. A project for the redevelopment of Thevenard harbor entailing the dredging of a new deep channel and reconstruction of the jetty is expected to be commenced during 1968-69. The construction of a further deep-sea port at Giles Point, Yorke Peninsula, for the bulk loading of grain, has recently commenced. A boat-haven has been established on Lake Butler at Robe and a wharf provided in the lake as a fish landing point for the fishing fleet. Slipways have been provided at several ports throughout the State.

CONTROL OF HARBORS

In the early days of the State many of the wharf frontages were alienated from the Crown but subsequently the re-establishment of public control of all wharves became a public issue. Following a report by a royal commission in 1911, the Harbors Act, 1913 was enacted providing for the acquisition, by the Crown, of wharves, water frontages and other properties; the creation of a board called The South Australian Harbors Board; for vesting in this Board the wharves, water frontages, and other properties acquired by or vested in the Crown. The Board appointed consisted of three members called Harbors Commissioners, who held office for a term of five years. However, the Harbors Act Amendment Act, 1966, provided for the abolition of the Harbors Board and the establishment of a Department of Marine and Harbors with all property, rights, powers, functions and duties transferring and vesting in the Minister of Marine; these provisions came into operation on 20 March 1967.

The Minister of Marine exercises his power under the Harbors Act, 1936-1967 and the Marine Act, 1936-1966, within all harbors (including the River Murray) in the State, over navigation therein and over all publicly-owned harbor works; controls all lights, buoys, beacons and other sea marks in harbors; constructs and maintains harbor works and installations and provides and operates bulk loading plants at deep-sea ports.

Accommodation constructed for fishing boats pursuant to the Fisheries Act, 1917-1967, is under the control of the Minister of Marine.

The tonnages handled in the ports operated by the Department in 1966-67 were 6,719,401 tons or approximately 41 per cent of the total tonnage of 16,553,357 tons passing through all the ports in South Australia; the balance being handled by the privately owned wharves. The total funds employed at 30 June 1967 were \$45,901,000, including \$830,000 for fishing havens.

Department of Marine and Harbors (a)
Funds Employed, Revenue and Expenditure

Year	Funds Employed	Revenue	Expenditure from Revenue			Surplus
			Working Expenses	Interest	Total	
			\$'000			
1962-63	39,334	5,098	3,344	1,531	4,876	222
1963-64	41,351	6,114	3,591	1,581	5,172	942
1964-65	42,748	6,201	3,908	1,679	5,586	614
1965-66	44,652	6,194	3,941	1,734	5,675	519
1966-67	45,901	6,734	4,019	1,807	5,827	907

(a) South Australian Harbors Board prior to 20 March 1967.

HISTORICAL

For a detailed description of development in the nineteenth century see pages 270-1 of the *South Australian Year Book* 1966.

Development in the Twentieth Century

As shipping increased through increased trade, many outport jetties were strengthened or replaced by better structures; in some cases new jetties were built nearby and the old jetties remained for fishermen. As the size and draft of vessels increased jetties were lengthened into deeper waters. Many new jetties were erected in the early part of the century, e.g. Murat Bay, Smoky Bay and Thevenard on the West Coast. Since 1930, most of the old wooden wharves at Port Adelaide have been replaced by concrete and steel structures complete with modern cargo sheds and storage areas. Since 1938 all the old wharves at Port Pirie have been replaced with steel sheetpiling walls and the berths and river channel deepened. In the 1920s coal handling facilities were installed at Osborne, Port Adelaide, and later extended for the bulk handling of phosphate rock and other loose materials.

Deepening or clearing of channels and deepening of berths was carried out by dredging over the years to keep most harbors open to shipping and to be able to accommodate larger and larger vessels. The opening of the Birkenhead Bridge in 1940 marked a further stage of development at Port Adelaide. Coastal shipping flourished in the pre-war period with regular services to the Gulf ports, West Coast and Kangaroo Island. Ketch traffic went to the main ports, carrying grain from the smaller outports for loading oversides into interstate or overseas vessels.

A change in the pattern of intrastate shipping has occurred with the erection of bulk handling facilities for grain at major ports in recent years. These facilities are now available at Port Adelaide, Port Pirie, Wallaroo, Port Lincoln and Thevenard and wheat and barley are being loaded at Ardrossan under agreement with the private owner. Grain is being carted overland to silos and loaded aboard overseas vessels by means of conveyors, so eliminating ketch trade from the smaller ports.

With no alternate means of transport and new soldier settlements in the 1950s, shipping trade to and from Kangaroo Island has increased. At the port of Kingscote the existing jetty has been widened and lengthened since May 1955. Additional harbor facilities were made with the provision of a trailership berth for the roll-on roll-off vessel *m.v. Troubridge* which went into service in November 1961. Trailership berths were also built at Port Adelaide and Port Lincoln.

In 1950 the Harbors Commissioners reported that the majority of the numerous ports established over the years along the coastline of South Australia and along the River Murray were operated at a loss. When these outport jetties and wharves were constructed, sea or river transport was practically the only means available to the settler on the land. However, the advent of motor transport and improved roads, and in some cases a preference for railways, meant that much of the water-borne trade had been diverted. Many of the numerous outports which once served the outback trade of the State were not used at all, whilst others were used for cargoes which could not be conveniently or more cheaply handled by other transport.

At one time it was thought that shipping along the River Murray would play an important role in South Australia's commercial transport system. However, the development of railway systems in New South Wales and Victoria and South Australia and the erection of the first bridge at Murray Bridge in 1879 took the trade away from the river steamers and the commercial use of South Australian river ports quickly declined. By the time of Federation in 1901 the importance of the Murray as a medium of commercial transportation had largely ceased.

Of more recent origin, is the decline in the use of some outports due to the introduction of silos at railway sites and major ports and the erection of bulk handling facilities for grain as mentioned earlier.

FUTURE DEVELOPMENT

The competition from intrastate road and rail transport has affected the larger ports as well, so that very little general cargo is carried between ports in this State. To decrease the delay in the turn round of vessels (especially overseas and interstate vessels) port facilities in the major harbors have been improved or are to be improved, *e.g.* reconstruction of wharves and deepening of berths and channels, installation of overhead cranes, increased storage sheds, etc.

The Greater Port Adelaide Plan was published in 1949 and embraced some twenty projects which were believed possible of completion before the end of the century. Amongst other projects the plan included:

- (1) The provision of adequate and up-to-date berths for shipping, new docks and an additional marshalling yard.
- (2) The rehabilitation of the dockyard at Glanville.
- (3) The deepening of the Port River.
- (4) The extension of the Osborne coal handling installation.
- (5) Provision of an oil dock.

Some phases of this plan have been completed whilst others are still to be carried out. In April 1964, approval was given for a start on a three stage plan, over six or seven years to widen and deepen the Port River at a cost of \$6.6 million. The stages include the deepening of the navigation channel between the Outer and Inner Harbors, the widening of most of this channel and the extension of the basin at the Outer Harbor. Larger ships will then be able to negotiate the Port River.

The recent advent of containerised cargo will affect only Port Adelaide as other ports of the State have no cargo of any significant quantity that is suitable for large containers. At Port Adelaide, the wharves and waterways need little improvement to meet the immediate need of overseas container trade either by a feeder service between here and a terminal port such as Melbourne or by direct shipment in vessels carrying a mixture of containers and other forms of general cargo.

A container depot on the Gillman Industrial Estate, near Port Adelaide, is being prepared for the feeder service, due to commence early in 1969, which will use one of the existing berths in No. 1 Dock. The other type of container trade is now using several existing berths which will need modest amounts of dredging when larger vessels appear late in 1969.

Another type of feeder service using an interstate roll-on/roll-off service is proposed for 1969 and a project for a special berth in No. 3 Dock is awaiting approval.

Long stretches of waterfront and large areas of land are available should Port Adelaide develop as a terminal port for overseas vessels handling containers only.

TIDES AND WATER DEPTH

Tides—the daily ebb and flow of the waters of the ocean—are due to gravitational effect of the sun and moon. Spring and neap tides are associated with phases of the moon, *i.e.* spring tides with the new moon and full moon, and neap tides with the first quarter and last quarter of the moon.

All around the Australian coast there is a well-marked 'diurnal inequality'; that is, the forenoon and afternoon tides may differ considerably in height. The mean tide rises in the following table are shown as higher high water and lower high water, rather than high water springs and neaps. This method of measuring tides which have this 'diurnal inequality', is found in nearly all South Australian ports.

Tides and Water Depths, South Australian Ports, 1 January 1968

Port	Maximum Depth below Low Water Datum (a)	Tides			
		At	Mean Rise		
			Higher High Water	Lower High Water	
	Ft In		Ft In	Ft In	
Outer Harbor:					
Channel	33 0	Wharf	7 11	6 5	
Wharves	35 0				
Port Adelaide:					
Channel	27 0	Wharf	8 0	6 6	
Wharves	35 0				
Ardrossan:					
Channel	(b)	Jetty	8 10	7 0	
Wharves (B.H.P. Jetty)	27 0				
Port Augusta:					
Channel	16 0	Wharf	9 2	7 4	
Wharf	20 0				
Port Lincoln:					
Channel	(c)	Jetty	4 11	3 6	
Wharves (Bulk Loading)	32 0				
Port Pirie:					
Channel (Harbor)	21 0	Wharves	8 4	5 11	
Wharves	27 0				
Port Stanvac:					
Channel	(b)	Wharf	6 1	4 7	
Wharf	35 0				
Proper Bay (B.H.P.):					
Channel	30 0	Jetty	4 11	3 6	
Wharf	34 0				
Thevenard:					
Channel	23 9	Jetty	5 0	3 7	
Wharf	27 0				
Wallaroo:					
Channel	27 9	Jetty	4 10	2 11	
Wharves	31 0				
Whyalla (B.H.P.):					
Inner Harbor;					
Channel	25 0	Jetty and Wharf	8 1	6 0	
Wharves	30 0				
Outer Harbor;					
Channel (Ore Jetty) No. 2	34 0	Jetty and Wharf	8 1	6 0	
Wharves (Ore Jetty) No. 2	34 0				

(a) The depth shown against wharves is the greatest at present available and may be found at one berth only at the wharf or jetty concerned.

(b) No approach channel. (c) Deep water gradually shoaling to depth at wharf.

AERODROMES

There were 649 civil aerodromes in Australia and Papua-New Guinea at 30 June 1967 including 118 owned and operated by the Commonwealth Government and 531 licensed aerodromes owned and operated by local authorities or private interests. In addition there are some hundreds of authorised landing grounds which are fields prepared for the operation of aircraft but not open to public use. These fields meet Civil Aviation Department specifications less exacting than those used in the development of government owned or licensed aerodromes.

In South Australia at 30 June 1967 there were eleven government and sixteen licensed aerodromes as set out below:

Government owned

Adelaide
Ceduna
Cleve
Cowell
Kingscote
Leigh Creek
Mount Gambier
Oodnadatta
Parafield
Port Lincoln
Whyalla

Licensed

Cordillo Downs
De Rose Hill
Ernabella Mission
Gidgealpa
Innamincka
Kimba
Millicent
Minnipa
Moomba
Mount Dare
Musgrave Park
Naracoorte
Port Pirie
Renmark
Tieyon
Tintinara

About half of the licensed aerodromes are on stations, missions, etc. in the northern part of the State. In addition to the civil aerodromes there are two major aerodromes, one at Woomera controlled by the Department of Supply through the W.R.E. and the other at Salisbury (Edinburgh Airfield), which are used by aircraft associated with trials operations, and by civil charter aircraft carrying passengers and freight. Edinburgh Airfield, the control of which was transferred from the Department of Supply to the Department of Air in February 1968, will become the base for an RAAF maritime squadron during 1968.

The main air terminal in South Australia is the Adelaide Airport at West Beach, and although not an international airport, it can be used by international aircraft when required. It is on the scheduled flights of interstate services from Sydney, Melbourne, Perth and Darwin and is the terminus of intrastate services. As part of the Civil Aviation Department's aerodrome development programme to provide improved airport facilities for new types of aircraft, construction was commenced at West Beach in 1947 and the aerodrome was opened to commercial aircraft in February 1955. The primary runway is 6,850 feet long by 200 feet wide and the secondary runway measures 5,420 feet by 150 feet. In addition to radio navigational aid systems and equipment there are modern hangars and a terminal building. The terminal building, opened in 1957 at a cost of approximately \$600,000, has a passenger lounge, modern baggage handling facilities, observation decks and incorporates the department's airways operations centre and airport control tower. A \$1.8 million airport expansion programme is currently in hand which includes the provision of additional area for aircraft movement and parking, an 1,150 feet extension to the primary runway and associated taxiway and ancillary works. Tenders are being called progressively for different phases of the work. Also included in the extensions is provision for the doubling of the passenger terminal which, with the growth of air traffic, has proved inadequate at peak periods. With the increased use

of jet aircraft on domestic routes, Australian designed visual approach slope guidance systems have been installed at Adelaide Airport whilst night landing facilities have been introduced at Kingscote, on Kangaroo Island.

Of note at the airport is the memorial to the late Sir Ross and Sir Keith Smith and their mechanics Bennett and Shiers to commemorate their flight from England to Australia in 1919. The Vickers Vimy aeroplane is housed in the memorial building together with equipment used on the flight and other souvenirs.

Since the opening of the Adelaide Airport the aerodrome at Parafield, about eleven miles north of Adelaide, has been restricted principally to use by light aircraft as operated by air taxi and crop dusting companies, private planes used for business or pleasure, and aircraft belonging to the Royal Aero Club of South Australia whose headquarters remained at Parafield.

Other aerodromes are situated near the larger towns, *e.g.* Mount Gambier, Whyalla, Port Pirie and Port Lincoln and in all cases these aerodromes have replaced the landing fields used by the smaller planes of the first airline companies.

A significant development during the year was the Commonwealth Government's approval for the introduction of commuter services in country areas. These are not airline services but regular flights by charter firms with small single and twin-engined aircraft operating to fixed and published time tables. They are intended to provide regular air links between many centres, towns and country areas which are either not served by the major airlines or have no direct air service with their capital or nearest major provincial city. The first commuter service approved was for flights between Adelaide and the South Australian opal fields.

Control of Aerodromes

At a conference of Commonwealth Ministers and State Premiers in May 1920, it was agreed that the Commonwealth should introduce a Bill to give effect to the Convention for the Regulation of Air Navigation signed in Paris on 13 October 1919. The Air Navigation Act was passed in December 1920 and a Controller of Civil Aviation was appointed as head of the Civil Aviation Branch which came under the jurisdiction of the Department of Defence.

The Act had three main objects:

- (1) Generally to regulate civil aviation activities in Australia.
- (2) To carry out the provisions of the Convention on Air Navigation signed in Paris.
- (3) To apply the principles of the Convention to domestic as well as international flying operations.

Regulations were drawn up under this Act to provide, *inter alia*, for the registration and periodical inspection of aircraft, licensing of aerodromes, examination and licensing of personnel engaged in flying and in upkeep of machines, control of aircraft movements, rules of the air, etc.

The South Australian Parliament passed the Commonwealth Powers (Air Navigation) Act, 1921 wherein it referred to the Commonwealth powers to make regulations in connection with international and interstate air navigation. The Air Navigation Act, 1937 provided for the application of the Commonwealth Air Navigation Regulations to and in relation to air navigation within the State of South Australia and repealed the earlier Act.

The Commonwealth civil aviation legislation at present includes the *Air Navigation Act* 1920-1966, the *Australian National Airlines Act* 1945-1961 and several other Acts, whilst the State legislation in South Australia includes the 1937 Act and the Civil Aviation (Carriers' Liability) Act, 1962.

Since 1939 Civil Aviation Administration has been a separate department under the Minister for Civil Aviation.

Historical

A description of early aerodromes in South Australia and recent developments was included on page 277 of the *South Australian Year Book* 1966.

8.6 ELECTRICITY AND GAS

ELECTRICITY

The period prior to 1946 saw the development of generating capacity by private enterprise and local authorities, with a dominant private company setting the pace from the turn of the century. It was also a period of almost complete dependence on imported fuels. By contrast the post-war era has been one of extremely rapid development under a semi-government authority and has seen the rapid exploitation of local fuel supplies.

On 1 September 1946, as a consequence of recommendations of a royal commission of inquiry, the assets of the Adelaide Electric Supply Co. were acquired and vested in the Electricity Trust of South Australia, which then became responsible for co-ordinating and investigating the supply of electricity to all parts of the State.

A more detailed description of the development of electricity supply is contained on pages 278-81 of the *South Australian Year Book* 1966.

Power Generation

In 1946 the Electricity Trust inherited at the Osborne power station the 'A' section, which had a generating capacity of 60,000 kilowatts, and the first installations of 'B' section, which began operating in 1947. At 30 June 1967 the generating capacity at Osborne was 300,000 kilowatts.

A major decision by the Trust was the construction of the Thomas Playford Power Station at Port Augusta, designed to burn Leigh Creek coal exclusively. The 'A' section was completed in 1954 while the 'B' section was completed in 1964 to give a combined total generating capacity of 330,000 kilowatts.

Following the passing of the Electricity Trust of South Australia (Torrens Island Power Station) Act in 1962, work was commenced on the construction of stage one of a power station on Torrens Island, near Port Adelaide. The first stage required the installation of two 120,000 kilowatt turbo-generators. One of these generators was operative in the winter of 1967 and the second was in operation by mid-1968. The second stage has been commenced and will comprise two 120,000 kilowatt generating units which are scheduled to be commissioned in 1969 and 1971 respectively.

The rapid growth of generating plant since 1946 can be seen from the following table.

Electricity Generation, South Australia

Installed Capacity of Generating Plant in Power Stations at 30 June^(a)

Power Stations	1946	1952	1955	1958	1961	1964	1967
KILOWATTS							
Electricity Trust:							
Osborne	79,000	172,000	204,000	264,000	264,000	264,025	300,000
Port Augusta	—	—	60,000	92,500	212,500	332,720	330,000
Torrens Island	—	—	—	—	—	—	120,000
Mount Gambier	—	—	—	14,200	19,200	22,230	21,800
Port Lincoln	—	—	—	5,000	6,933	6,890	9,600
Other	—	3,500	2,135	—	—	—	—
Total E.T.S.A.	79,000	175,500	266,135	375,700	502,633	625,865	781,400
Other government authorities ..	205	205	777	731	4,741	3,372	3,803
Local authorities	33,401	34,808	36,541	(b) 5,067	4,675	6,561	4,404
Private	29,855	28,162	26,825	18,600	33,537	33,109	4,818
Total	142,461	238,675	330,278	400,098	545,586	668,907	794,425

(a) Includes house plants used for emergency generation.

(b) Municipal Tramways Trust ceased generating in 1956.

At 30 June 1967 steam generating plants represented 99 per cent of total capacity, the remainder being internal combustion plants.

Fuels

The following table shows the quantities of various fuels consumed by the Electricity Trust in selected years since 1946 and illustrates the considerable movement in their relative importance.

Electricity Trust of S.A., Fuels Consumed in Steam Power Stations

Year	N.S.W. Coal	Leigh Creek Coal	Oil	Wood	Coke
Tons					
1945-46 (a)	190,889	15,101	—	—	—
1957-58	328,214	668,128	47,019	61,032	14,268
1960-61	185,043	938,532	98,216	110,304	12,627
1963-64	72,253	1,566,986	110,165	166,735	1,818
1965-66	73,495	1,926,672	194,838	184,420	—
1966-67	50,241	2,089,916	228,999	184,722	—

(a) Consumed by Adelaide Electric Supply Co.

(b) Includes 32,884 tons of overseas coal.

The construction of refineries in Australia has resulted in residual oil being available at a price competitive with coal and increasing quantities of oil are being consumed in power generation. The majority of the boilers at Osborne are now oil burning.

However, Leigh Creek coal is currently a more economical fuel than imported coal or oil, and where possible power for the central network is generated at Port Augusta with the Osborne station being used primarily to meet peak loads.

The discovery of natural gas in the north-east of the State in commercial quantities and the decision by the State Government to construct a pipe-line from the gas fields to Adelaide will provide another local source of fuel for the future.

In planning the Torrens Island Power Station the Electricity Trust has made provisions in the design of the boilers for conversion to use natural gas. This would provide one method of distribution of the energy from natural gas as electricity is distributed to all of the main settled areas.

Wood has also been used since the construction of the Mount Gambier and Nangwarry power stations. Its future as a fuel is, however, uncertain and depends on alternative uses of waste wood, particularly in the pulp industry.

Transmission and Distribution

The Electricity Trust was specifically charged with the responsibility of expanding its services into country areas. In the immediate post-war years shortages of materials somewhat handicapped the rate of extension; however, a vigorous expansion of services in general has taken place as is illustrated in the following table.

Electricity Trust of S.A., Transmission Lines
At 30 June

Rated Voltage	1946	1952	1955	1958	1961	1964	1967
	MILES						
275,000 volt	—	—	—	—	370	370	370
132,000 volt	—	177	642	642	642	1,043	1,249
66,000 volt	105	222	277	335	375	430	466
33,000 volt	477	631	854	1,131	1,344	1,774	2,119
19,000 volt (SWER) (a)	—	—	—	26	1,877	5,065	8,445
11,000 and 7,600 volt	564	1,041	1,728	2,537	3,303	4,627	5,607
Total mileage	1,146	2,071	3,501	4,671	7,911	13,309	18,256

(a) Single wire earth return system.

Electric power is transmitted over considerable distances at very high voltages and is stepped down at sub-stations and distribution centres.

The most important transmission lines are those connecting the major production centre, Port Augusta, with the metropolitan area. The initial link between these centres was made with two 132,000 volt lines. These lines follow similar routes to Bungama, near Port Pirie, where a sub-station serves the mid-north area. From Bungama the lines diverge, one passing through South Hummocks where a major sub-station supplies Yorke Peninsula, and the other running *via* Waterloo where a sub-station serves the Upper Murray.

Further lines linking Port Augusta and Adelaide were brought into use in 1960 and 1961. These lines of 275,000 volts are not tapped at intermediate points.

Major transmission lines also extend from the central network, to Woomera (Commonwealth line), Berri (completed 1954-55), Leigh Creek (1961-62), Mount Gambier (1962-63), Whyalla (1963-64) and Port Lincoln (1966-67). Consumers on Kangaroo Island are supplied by a 33,000 volt submarine cable across Backstairs Passage. A second circuit 132,000 volt line from Playford Power Station to Whyalla was completed in the latter half of 1967 and a 132,000 volt line from Waterloo to North West Bend (near Morgan) is due for completion in 1968.

In recent years extensive use of the single wire earth return system (see table above) has resulted in the supplying of electricity to areas where consumers are so scattered that supply by conventional methods would have been impracticable.

Electricity Trust of S.A., Number of Consumers*At 30 June*

Consumers	1946 (a)	1952	1955	1958	1961	1964	1967
Residential		143,040	171,757	203,321	239,446	277,399	321,731
Commercial		19,664	22,955	28,275	32,615	35,477	38,950
Industrial	Not available	2,851	4,790	6,665	10,670	15,579	19,956
Bulk and traction		7	16	15	15	10	7
Total	118,262	165,562	199,518	238,276	282,746	328,465	380,644

(a) At 31 August.

GAS

Gas was generated at three major works in South Australia during 1967; two in the metropolitan area and one at Port Pirie. Smaller works at Reynella, Pimpala and Christies Beach distribute gas to the adjoining areas, using liquefied petroleum gas as feedstock. All production for the Adelaide metropolitan area and Port Pirie was by the South Australian Gas Company, a privately owned company regulated by State legislation. Until recently gas had also been produced at Mount Gambier, and prior to the 1914-18 War gas works were operated at Gawler, Kapunda and Strathalbyn.

The South Australian Gas Company was incorporated by Act of Parliament in 1861 to supply gas to Adelaide and surrounding villages. The first gas was produced at Brompton in 1863 and subsequent plants were opened at Port Adelaide in 1866 and Glenelg in 1875.

An Act authorising a second company, the Provincial Gas Company, was assented to in 1869. This company established a metropolitan works at Thebarton in 1871 and country works were opened at Gawler, Kapunda and Strathalbyn. In 1878 this undertaking was absorbed by the South Australian Gas Company and manufacturing at the Thebarton plant ceased. The country works were kept in operation until 1917. Gas was first produced at Port Pirie in 1892.

Following the development of high pressure distribution facilities the South Australian Gas Company was able to centralise its metropolitan production at Brompton with the Port Adelaide and Glenelg plants ceasing production in 1922 and 1923. These plants together with the earlier Thebarton works were retained as holder stations. In 1928 a new gas works was opened adjacent to the Port River at Osborne. The Osborne works were closed for several years during the 1930s depression.

Since the 1939-45 War a considerable expansion of manufacturing capacity and distribution facilities has taken place.

South Australian Gas Co., Capital, Consumers, and Mains*At 30 June*

Particulars	1940	1950	1960	1967
Capital employed (\$m)	5.4	6.0	19.4	34.0
Number of consumers (a)	61,207	84,629	121,720	172,525
Miles of mains	904	1,042	1,569	2,034

(a) Includes consumers of bottled gas.

Details of the present day capacity of plant by the type of gas produced are given in the following table.

South Australian Gas Co., Plant Capacity

At 30 June 1967

Location	Coal Gas	Carburetted Water Gas	Reformed Gas (a)	Liquefied Petroleum Gas (b)	Total
	'000 Cubic Feet per Day				
Brompton	—	4,000	20,000	—	24,000
Osborne	6,500	750	—	1,500	8,750
Port Pirie	—	250	500	—	750
Total	6,500	5,000	20,500	1,500	33,500

(a) Using refinery gas and light virgin naphtha as feedstock.

(b) Mixed with other gases for distribution through the mains network.

The manufacture of gas by the carbonisation of black coal imported from New South Wales was the conventional method of production until the end of the 1939-45 War. Under this process large quantities of coke and tar are produced as by-products and a declining market for these residuals together with the development of alternative production methods has resulted in less emphasis in recent years on this method of production.

In 1948 and 1950 the company installed plant at Osborne and Brompton for the manufacture of carburetted water gas from oil distillate and coke. This plant was introduced to help meet peak winter loads and can be brought into production much more rapidly than carbonising retorts.

Liquefied petroleum gas has been available in South Australia since 1957. This gas is largely distributed in portable cylinders although a small quantity is converted for mains distribution when refinery gas is not available.

Refinery gas from the Port Stanvac oil refinery is piped to the Brompton works where two reforming plants convert it to towns gas and another two reforming plants have been installed to use light virgin naphtha as the initial feedstock. When current plant modifications are complete all four plants will be capable of reforming either refinery gas or light virgin naphtha and natural gas when this becomes available. A similar plant is in use at Port Pirie for the reforming of light virgin naphtha.

Following the discoveries of natural gas at Gidgealpa and the establishment of the Natural Gas Pipelines Authority the South Australian Gas Company has entered into a twenty year contract with the producers for the supply of natural gas, and consumers' appliances will eventually be converted to use this new fuel.

Gas from the various works is reticulated through most of the metropolitan area and Port Pirie. In addition liquefied petroleum gas is distributed by reticulation at Mount Gambier by the Mount Gambier Gas Company Ltd, at Christies Beach, Reynella, and Pimpala by the South Australian Gas Company, and is available elsewhere as bottled gas.

An inter-connected system of high pressure mains traverses the metropolitan area from the Brompton and Osborne works and mains extend south to Flagstaff Hill, north-east to Tea Tree Gully and north to Elizabeth. The Elizabeth main

was first laid for industrial use but now serves over 6,000 domestic consumers including 2,000 in the Elizabeth area. The pressure in these mains is reduced at district governors for distribution through smaller pipes to consumers.

At 31 December 1967 the company was maintaining 2,057 miles of mains from its metropolitan works and supplying nearly 175,000 consumers. Approximately 80 per cent of the gas supplied was used in domestic dwellings. The Port Pirie system involved 50 miles of mains.

Variations during the day in the demand for gas necessitates the storage of considerable quantities and gas holders with a combined capacity of 10 million cubic feet are situated in a number of suburbs. At Port Pirie facilities exist for the storage of 340,000 cubic feet of gas.

8.7 HOUSING AND BUILDING

HOUSING

Features of housing development in South Australia have been the high proportion of stone houses built in earlier years, and of brick houses in more recent years. The familiar old-style stone houses are still to be seen in most settled parts of the State, especially in rural areas. The 1947 Census was in fact the first at which houses with outer walls of brick outnumbered those with walls of stone.

The building materials used have largely been determined by the availability of building stone and deposits of clay suitable for brickmaking, and by the relative lack of natural timbers suitable for houses. Recently brick veneer homes have become more popular, particularly in the metropolitan area, but this is partly due to the poor building soil in some of the metropolitan and near-metropolitan areas.

DWELLINGS: CENSUS DATA

Information on housing is obtained mainly from particulars of dwellings collected at each Census of the population. For the purpose of the Census a 'dwelling' is any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term 'dwelling' includes houses and flats, and in addition habitations ranging from a single-roomed shack to a multi-roomed hotel or institution.

Dwellings have been classified as 'private' or 'other than private'. Private dwellings include private houses, shares of private houses, flats and other private dwellings; other than private dwellings include hotels, motels, boarding houses, lodging houses and hostels, educational, religious and charitable institutions, hospitals, defence and penal establishments, police and fire stations, clubs, staff barracks and quarters, etc.

Total dwellings increased almost three-fold in the forty-five years to 1966, with the greatest increase (about 155,000 out of a total of 215,000) occurring subsequent to the 1947 Census.

Dwelling counts from the last six Censuses are shown in the next table; figures exclude dwellings occupied solely by full-blood Aboriginals.

Dwellings in South Australia, Censuses 1921 to 1966

Census	Occupied			Unoccupied (a)	Total Dwellings
	Private	Other than Private	Total		
1921	104,295	3,619	107,914	4,431	112,345
1933	136,611	2,663	139,274	5,353	144,627
1947	166,118	2,420	168,538	3,547	172,085
1954	212,095	3,206	215,301	8,524	223,825
1961	259,344	2,564	261,908	17,061	278,969
1966 (p) ..	299,629	2,684	302,313	25,110	327,423

(p) Preliminary and subject to amendment.

(a) Includes 'weekenders', holiday houses and other dwellings whose usual occupants were temporarily absent on Census night.

The next table gives details of occupied dwellings only, according to the type of dwelling. Private dwellings were classified into the following four categories:

Private House—includes houses, sheds, huts, garages, etc. used for dwelling purposes, and shared private houses for which only one householder's schedule was received.

Share of Private House—is a portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received.

Flat—is a part of a house or other building which can be completely closed off and which has its own cooking and bathing facilities.

Other Private Dwelling—includes private dwellings such as rooms, apartments, etc. which are parts of buildings but are not self-contained units.

Occupied Dwellings by Class, South Australia, Censuses 1961 and 1966

Class of Occupied Dwelling	30 June 1961			30 June 1966 (p)
	Metropolitan (a)	Country	Total	Total
Private dwellings:				
Private house;				
House	140,113	91,527	231,640	271,044
Shed, hut, etc.	931	1,956	2,887	1,938
Share of private house	7,276	1,258	8,534	2,140
Flat	12,239	1,855	14,094	20,863 (b)
Other	1,992	197	2,189	3,644
Total private dwellings	162,551	96,793	259,344	299,629
Other than private dwellings:				
Licensed hotel (c)	206	371	577	593
Motel, boarding house, etc.	838	328	1,166	966
Educational and religious institutions	84	45	129	116
Hospital	95	85	180	191
Charitable institution	36	8	44	52
Other	90	378	468	766
Total other than private dwellings	1,349	1,215	2,564	2,684
Total occupied dwellings	163,900	98,008	261,908	302,313

(p) Preliminary.

(a) As defined for Census purposes prior to 30 June 1966.

(b) Includes share of self-contained flat.

(c) Includes hotel-motel.

During the five year period, the number of houses increased by approximately 17 per cent while the number of flats increased by approximately 48 per cent. Shares of private houses decreased and more houses and flats were built. The number of flats increased almost four-fold between 1954 and 1966.

Classification of Occupied Private Dwellings

The tables in this section give details of occupied private dwellings only. At the time of publication only limited 1966 Census information was available and is shown below, followed by 1961 Census details where later information was not available.

Occupied Private Dwellings by Nature of Occupancy, South Australia Censuses 1961 and 1966

Nature of Occupancy	30 June 1961				30 June 1966 (p)
	Private House	Share of Private House	Flat	Total (including Other)	Total
Owner	115,860	2,689	2,555	121,266	} 215,531
Purchaser by instalments ...	58,578	871	525	60,022	
Tenant:					
Government	20,152	29	1,604	21,801	27,620
Private	34,397	4,692	9,082	50,085	50,609
Other occupancy	4,591	169	280	5,071	4,146
Not stated	949	84	48	1,099	1,723
Total	234,527	8,534	14,094	259,344	299,629

NOTE: For definitions of private house, share of private house, and flat, see page 308.

(p) Preliminary.

Owners and purchasers by instalments occupied approximately 72 per cent of all occupied private dwellings at 30 June 1966 whilst tenants occupied about 26 per cent. The increase in the number of dwellings since the 1961 Census was mainly in dwellings occupied by owners and purchasers by instalments.

Occupied Private Dwellings by Material of Outer Walls, South Australia Censuses 1961 and 1966

Material of Outer Walls	30 June 1961			30 June 1966 (p)
	Metropolitan (a)	Country	Total	Total
Brick (including brick veneer)	109,451	21,578	131,029	176,320
Stone	23,431	40,586	64,017	59,836
Concrete	10,538	7,930	18,468	18,520
Wood	6,660	6,647	13,307	13,770
Iron	2,578	6,912	9,490	6,638
Fibro-cement	9,320	12,172	21,492	23,498
Other and not stated	573	968	1,541	1,047
Total	162,551	96,793	259,344	299,629

(p) Preliminary.

(a) As defined for Census purposes prior to 30 June 1966.

In 1966 the number of private dwellings with outer walls of brick represented almost 60 per cent of all occupied private dwellings. This was a significant increase over the 1961 proportion of 50.5 per cent, and was well above the Australian figure of 39.0 per cent. Private dwellings with stone walls represented 24.7 per cent of the total in 1961 and it fell to 20.0 per cent at 1966. Despite this falling proportion, almost 80 per cent of all stone houses in Australia in 1966 were located in this State.

In Australia 37.0 per cent of occupied private dwellings had outer walls of wood, but in South Australia the proportion was only 4.6 per cent.

**Occupied Private Dwellings by Facilities, South Australia
Censuses 1961 and 1966**

Facilities	30 June 1961			30 June 1966 (p)
	Metropolitan (a)	Country	Total	Total
Gas only	177	510	687	770
Electricity only	56,284	78,707	134,991	146,862
Gas and electricity	105,712	9,735	115,447	149,336
Neither gas nor electricity	161	7,223	7,384	1,745
Not stated	217	618	835	916
Total	162,551	96,793	259,344	299,629
Television set	99,979	25,105	125,084	237,564

(p) Preliminary.

(a) As defined for Census purposes prior to 30 June 1966.

At the 1961 Census, 251,125 (96.8 per cent) occupied private dwellings were stated to have gas and/or electricity and by 1966 this figure had increased to 296,968 (99.1 per cent). The proportion for Australia at the 1966 Census was 98.5 per cent.

The percentage of occupied private dwellings with television sets was 48.2 per cent at the 1961 Census compared with 79.3 per cent in 1966. The comparable figure for Australia at the 1966 Census was 77.4 per cent.

At the 1966 Census each householder was asked to state the number of motor vehicles (excluding motor cycles and scooters) at the dwelling on Census night. Details were obtained only for private dwellings. Information relating to the number of motor vehicles was not sought at the 1961 Census and consequently comparable figures for 1961 are not available, however, a comparison between Australia and South Australia for 1966 is given in the following table.

**Number of Occupied Private Dwellings by Number of Motor Vehicles, South
Australia and Australia, Census 1966**

No. of Vehicles per Occupied Private Dwelling	South Australia		Australia	
	No. of Dwellings	Per Cent	No. of Dwellings	Per Cent
No Vehicles	58,121	19.4	742,567	23.6
1 vehicle	155,969	52.1	1,608,321	51.0
2 vehicles	58,877	19.6	552,930	17.5
3 vehicles	15,194	5.1	120,500	3.8
4 or more vehicles	5,770	1.9	40,658	1.3
Not stated	5,698	1.9	86,873	2.8
Total occupied private dwellings ...	299,629	100.0	3,151,849	100.0
Total vehicles	345,151	..	3,257,180	..

The number of rooms includes kitchen and enclosed sleep-out, but does not include bathroom, pantry, laundry or storehouse. The largest increases in the seven year period were in five and six roomed dwellings. In 1961, five roomed dwellings were 41.6 per cent of all occupied dwellings; six roomed dwellings were 23.2 per cent. The total increase in private houses was approximately 43,000 and over 30,000 of these were five roomed private houses.

**Occupied Private Dwellings by Number of Rooms, South Australia
Censuses 1954 and 1961**

Number of Rooms per Dwelling	30 June 1954				30 June 1961			
	Private House	Share of Private House	Flat	Total (including Other)	Private House	Share of Private House	Flat	Total (including Other)
1.....	1,241	1,125	18	3,064	1,088	586	94	2,278
2.....	4,006	2,545	374	7,739	1,944	1,786	1,265	5,721
3.....	9,197	3,068	1,635	14,430	6,298	2,519	4,869	14,251
4.....	33,778	2,295	1,970	38,280	31,901	1,901	4,680	38,699
5.....	74,288	1,435	1,068	76,874	104,476	1,241	2,066	107,849
6.....	46,569	875	395	47,898	59,292	199	702	60,207
7.....	14,320	307	111	14,755	18,817	46	226	19,092
8.....	4,969	128	42	5,150	6,211	20	99	6,333
9.....	1,678	44	24	1,754	2,172	7	33	2,213
10 and over	1,588	46	17	1,660	1,924	12	13	1,951
Not stated	232	188	20	491	404	217	47	750
Total	191,866	12,056	5,674	212,095	234,527	8,534	14,094	259,344
Average number of rooms per private dwelling	5.20	3.46	4.03	5.04	5.35	3.29	3.80	5.17

NOTE: For definitions of private house, share of private house, and flat, see page 308.

Average weekly rents for unfurnished private dwellings almost doubled in the seven year period to June 1961. Of all dwellings for which information was obtained, 27.7 per cent were at a rental of \$7 or more per week in 1961, compared with only 2.4 per cent in this range in 1954. There was a corresponding fall in the proportion of dwellings with weekly rental at less than \$4—from 78.8 per cent in 1954 to 37.9 per cent in 1961.

**Occupied Tenanted Private Dwellings^(a) by Weekly Rent (Unfurnished)
South Australia, Censuses 1954 and 1961**

Weekly Rent (Unfurnished)	30 June 1954				30 June 1961			
	Private House	Share of Private House	Flat	Total (including Other)	Private House	Share of Private House	Flat	Total (including Other)
Under \$1.....	1,429	104	16	1,587	420	12	3	443
\$1 and under \$2 ..	6,793	671	124	7,717	1,921	98	114	2,212
\$2 and under \$3 ..	11,529	1,214	450	13,368	4,602	255	300	5,221
\$3 and under \$4 ..	7,661	894	748	9,485	4,429	282	381	5,172
\$4 and under \$5 ..	3,479	507	593	4,706	4,308	372	440	5,196
\$5 and under \$6 ..	1,164	195	240	1,642	2,833	287	347	3,539
\$6 and under \$7 ..	940	112	221	1,303	2,209	338	495	3,125
\$7 and under \$8 ..	204	47	115	376	997	230	377	1,663
\$8 and under \$9 ..	163	20	73	260	858	232	426	1,556
\$9 and under \$10 ..	59	4	32	99	471	84	293	887
\$10 and over	154	23	62	242	3,192	247	1,964	5,456
Not stated (b).....	7,563	3,329	1,453	13,816	8,157	2,255	3,942	15,615
Total	41,138	7,120	4,127	54,601	34,397	4,692	9,082	50,085
Average weekly rent (unfurnished) per private dwelling ..	\$2.83	\$2.95	\$4.27	\$2.94	\$5.13	\$5.71	\$8.23	\$5.63

NOTE: For definitions of private house, share of private house and flat, see page 308.

(a) Excludes dwellings where tenants were paying rent to a government authority—including South Australian Housing Trust (1954) and to South Australian Housing Trust only (1961).

(b) Includes dwellings which were let furnished, rent-free dwellings and dwellings attached to shops, etc. at a combined rent.

Occupied Private Dwellings by Number of Inmates, South Australia Censuses 1954 and 1961

Number of Inmates per Dwelling	30 June 1954				30 June 1961			
	Private House	Share of Private House	Flat	Total (including Other)	Private House	Share of Private House	Flat	Total (including Other)
1.....	12,712	2,840	1,078	17,586	18,339	2,285	3,345	25,007
2.....	44,168	4,322	2,382	51,657	53,596	2,444	5,491	62,128
3.....	41,888	2,444	1,197	45,958	44,946	1,588	2,493	49,312
4.....	42,784	1,368	638	44,992	50,188	1,156	1,543	53,034
5.....	26,864	611	250	27,809	34,430	549	726	35,779
6.....	13,370	268	80	13,740	18,452	284	282	19,050
7.....	5,731	131	32	5,906	8,342	127	144	8,625
8.....	2,590	57	11	2,663	3,715	70	52	3,840
9.....	982	11	5	1,001	1,422	19	14	1,456
10 and over	777	4	1	783	1,097	12	4	1,113
Total	191,866	12,056	5,674	212,095	234,527	8,534	14,094	259,344
Total inmates..	690,542	30,466	14,082	740,424	856,767	22,758	34,894	918,773
Average number of inmates per private dwelling	3.60	2.53	2.48	3.49	3.65	2.67	2.48	3.54

NOTE: For definitions of private house, share of private house, and flat, see page 308.

The slight increase in average number of occupants per occupied private dwelling reversed a trend which had persisted for a long time. The figure fell from 4.02 in 1933 to 3.65 in 1947 and 3.49 in 1954, before rising to the 1961 figure of 3.54.

Unoccupied Dwellings

There were 17,061 dwellings unoccupied at 30 June 1961, and only 3,386 of these were vacant and for sale or renting. Unoccupied dwellings totalled 25,110 at the 1966 Census of which 6,014 were for sale or renting. The following table shows unoccupied dwellings classified by reason for being unoccupied.

At the 1961 Census, Central Statistical Division included the seaside areas of Victor Harbor, Port Elliot, Port Noarlunga, Christies Beach, Moana and Sellicks Beach; hence the large number of unoccupied holiday houses and 'weekenders'.

Unoccupied Dwellings in Statistical Divisions, South Australia Censuses 30 June 1961 and 1966

Division	For Sale or Renting	Holiday House, 'Weekender', Seasonal Workers' Quarters	Occupants Temporarily Absent	Condemned or to be Demolished	Other and Not Stated	Total
1961 Census:						
Metropolitan(a)	1,673	264	2,344	382	932	5,595
Central	877	2,596	812	119	1,087	5,491
Lower North	278	638	512	47	417	1,892
Upper North	57	54	208	4	103	426
South Eastern	210	385	285	30	328	1,238
Western	109	448	271	22	87	937
Murray Mallee	130	640	301	18	244	1,333
Remainder of State.....	52	40	34	3	20	149
Total	3,386	5,065	4,767	625	3,218	17,061
1966 Census						
Total	6,014	6,704	4,832	624	6,936	25,110

(a) As defined for Census purposes prior to 30 June 1966.

BUILDING

BUILDING CONTROL

The Building Act, 1923-1965 gives local government authorities power to control building operations within their municipality or district. This power is not automatic but follows a request from a local government authority for all, or a specified portion of its area, to be brought under the Act. In areas outside the jurisdiction of the Building Act certain building provisions under the Local Government Act, 1934-1967 apply.

Persons erecting or altering buildings on land coming under the Building Act are required to submit to a building surveyor appointed by the local government authority details and plans of the work envisaged and to receive written approval before commencing operations. Authorities concern themselves with such things as the size and location of buildings, the materials used, the height of ceilings and the provision of ventilation and drainage. They have the power to disapprove plans and provisions exist for a right of appeal in such cases.

Following the approval of plans, local government inspectors visit the construction site to inspect foundations and may visit the site at other times to check that council requirements are being met.

In addition to administering the general site and structural requirements of the Act, authorities may effect their own by-laws on certain matters. A by-law may prescribe a higher minimum size for dwelling sites than that provided under the Act or may regulate the positioning of a dwelling on a site. One of the most important by-law powers is that of defining particular areas or zones within which the nature of buildings and their use may be restricted. Thus certain areas may be proclaimed residential areas with industrial and commercial premises, beyond those already in existence, prohibited; other areas are designated as industrial zones.

BUILDING OPERATIONS

Details of building operations in South Australia are compiled from returns collected from all builders of new buildings. The statistics relate only to buildings as distinct from other construction activity such as roads, bridges, earthworks and water storage. Alterations and additions of \$10,000 and over to existing buildings are included with new buildings.

All values shown exclude the value of land and unless otherwise stated represent the anticipated or actual value of buildings upon completion.

Building Approvals

The following table shows the value of new buildings, and alterations and additions for which approval was given during 1966 and 1967. In addition to information on permits issued to private persons and organisations for building in areas subject to building control, particulars have been included of buildings known to be projected or to have started in areas outside building control and details of contracts let or expenditure authorised by governmental and semi-governmental authorities.

In using approvals as an indicator of building activity it should be noted that certain projects may be cancelled, delayed or altered and resubmitted for approval, that large projects may be spread over a number of years, and that building costs may vary over the period of construction.

Building Approvals, South Australia

Type of Building	1966			1967		
	Private	Govt	Total	Private	Govt	Total
New Buildings :						
	Number					
Houses	6,357	1,773	8,130	5,061	795	5,856
Flats (a)	1,564	—	1,564	1,672	17	1,689
	\$'000					
Houses	52,731	9,967	62,698	46,013	4,875	50,888
Flats	6,897	—	6,897	8,311	71	8,382
Shops	6,288	152	6,440	7,052	218	7,270
Hotels, hostels, etc.	1,805	—	1,805	2,313	—	2,313
Factories	5,566	302	5,868	7,252	198	7,450
Office premises	1,335	2,188	3,523	4,974	2,997	7,971
Other business premises	3,094	1,399	4,493	6,082	4,366	10,448
Entertainment and recreation	665	421	1,086	1,223	274	1,497
Educational	2,275	10,158	12,433	2,033	22,232	24,265
Religious	847	—	847	685	—	685
Health	1,038	3,112	4,150	624	7,466	8,090
Miscellaneous	1,133	1,200	2,333	339	1,118	1,457
Total value	83,674	28,899	112,573	86,901	43,815	130,716
Alterations and additions (b)	14,601	1,534	16,135	14,075	1,058	15,133
Total value all building	98,275	30,433	128,708	100,976	44,873	145,849

(a) Number of individual dwelling units.

(b) Alterations and additions of \$10,000 or more are included with new buildings.

Value of Work Done

The best measure of building activity is that of value of work done, *i.e.* of work actually carried out on buildings during the period.

New Buildings: Value of Work Done, South Australia

Type of Building	1963	1964	1965	1966	1967
	\$'000				
Houses (a)	67,018	75,926	75,743	70,533	61,589
Flats (b)	4,222	7,542	11,324	7,568	6,311
Total dwellings (a)	71,240	83,468	87,067	78,101	67,900
Business premises :					
Hotels, etc.	1,732	2,214	2,762	3,694	2,572
Shops	5,574	6,292	4,354	3,984	8,425
Factories	12,390	18,828	19,671	11,956	10,633
Office premises	4,620	7,104	5,794	9,444	11,243
Other	5,302	5,520	7,056	5,324	8,144
Educational	9,298	9,230	13,932	15,626	11,145
Religious	1,328	2,364	2,113	1,512	806
Health	3,824	4,700	7,962	11,300	8,045
Entertainment, etc.	934	1,652	1,824	1,899	1,708
Miscellaneous	3,188	4,700	4,579	3,113	2,284
Total new buildings (a) .	119,430	146,072	157,114	145,953	132,905

(a) Excludes owner-built houses.

(b) Includes home units.

Information on the value of work done on owner-built houses is not collected. However, an estimate based on the value of houses commenced, completed and under construction is calculated for such houses, yielding figures of \$5.0 million for 1965, and \$4.7 million for each of the years 1966 and 1967.

Buildings Under Construction

At the end of 1967 new buildings with an anticipated value when completed of \$104,514,000 were in the process of construction, with work done on these buildings valued at \$57,538,000. There were 3,290 houses and 610 flats in the course of construction, having an anticipated value when completed of \$31,253,000. The ratio of houses under construction at the end of 1967 to houses completed during that year was 39 per cent, suggesting an average construction period of slightly less than five months. This ratio had previously fallen from 85 per cent in 1955, indicating a ten to eleven months construction period, to 54 per cent in 1960.

New Buildings Commenced

A building is recorded as commenced when work on the foundation has begun. In the table below commencements during 1966 and 1967 have been classified according to ownership at the date of commencement. Almost all houses recorded under the 'government' heading were being built for the South Australian Housing Trust, many of them being intended for sale on completion.

New Buildings^(a) Commenced, South Australia

Number of dwelling units and anticipated completion value (\$'000) of new buildings commenced

Type of Building	1966			1967		
	Private	Govt	Total	Private	Govt	Total
	Number					
Houses	6,570	2,700	9,270	5,305	1,996	7,301
Flats (b)	1,476	—	1,476	1,363	—	1,363
	\$'000					
Houses	55,723	17,628	73,351	48,774	13,817	62,591
Flats (b)	6,933	—	6,933	6,596	—	6,596
Shops	7,127	164	7,291	6,966	171	7,137
Hotels, hostels, etc.	2,309	—	2,309	2,872	36	2,908
Factories	7,213	520	7,733	8,296	180	8,476
Office premises	8,347	2,395	10,742	4,243	3,103	7,346
Other business premises	3,349	2,005	5,354	5,473	3,876	9,349
Entertainment and recreation	1,277	323	1,600	1,541	328	1,869
Educational	2,437	11,235	13,672	1,792	7,341	9,133
Religious	1,154	—	1,154	673	—	673
Health	1,538	10,774	12,312	851	1,030	1,881
Miscellaneous	1,182	815	1,997	1,114	1,174	2,288
Total value of new buildings commenced	98,589	45,859	144,448	89,191	31,056	120,247

(a) Alterations and additions of \$10,000 or more are included with new buildings.

(b) Includes home units.

New Buildings Completed

Details of new buildings completed for the years 1958-1967 are given below. A building is regarded as having been completed when the contractor has fulfilled the terms of the contract or in the case of an owner-built house when the dwelling is either completed or occupied, whichever occurs first. However, the value in all cases is that of the building as a finished product.

New Buildings Completed, South Australia

Year	Number of Dwellings		Value of New Buildings			
	Houses	Flats (a)	Houses	Flats (a)	Other	Total
			\$'000	\$'000	\$'000	\$'000
1958.....	7,705	562	50,060	2,684	32,544	85,288
1959.....	8,628	591	55,966	2,778	29,508	88,252
1960.....	9,379	790	63,326	4,042	37,190	104,558
1961.....	9,119	709	62,052	3,724	37,808	103,584
1962.....	9,280	583	61,966	3,198	49,404	114,568
1963.....	10,316	816	70,396	4,162	45,092	119,650
1964.....	10,869	1,279	78,148	6,264	54,288	138,700
1965.....	10,597	2,149	79,443	11,612	66,257	157,312
1966.....	10,095	1,607	78,810	8,288	56,824	143,922
1967.....	8,335	1,317	69,132	6,191	65,890	141,213

(a) Includes home units.

The following table gives further details of dwellings completed over the five years to 1967. A noticeable feature of the table is the increasing relative importance of flats, notwithstanding the diminishing number of government flats completed during the period. Flats accounted for 7.3 per cent of dwelling completions in 1963; rose to 16.9 per cent in 1965 then fell to 13.6 per cent in 1967. However, no government-owned flats were completed in 1966 or 1967.

Most of the flat building has taken place in the local government areas of Unley, West Torrens, Burnside and Glenelg.

Number of New Dwellings Completed, South Australia

Type of Dwelling	1963	1964	1965	1966	1967
Private:					
Contract-built houses	6,854	7,380	6,834	6,264	5,136
Owner-built houses (a)	598	557	624	560	596
Total houses	7,452	7,937	7,458	6,824	5,732
Flats (b)	700	1,252	2,045	1,607	1,317
Total private dwellings....	8,152	9,189	9,503	8,431	7,049
Government:					
Houses	2,864	2,932	3,139	3,271	2,603
Flats	116	27	104	—	—
Total government dwellings	2,980	2,959	3,243	3,271	2,603
Total all dwellings.....	11,132	12,148	12,746	11,702	9,652

(a) Owner-built are houses erected without services of contractor for whole job.

(b) Includes home units.

The value of buildings, other than dwellings, completed over the same period is shown below. Included under 'other business premises' are service-stations, warehouses and communication buildings and under 'miscellaneous' are defence establishments, buildings for law and order and certain institutional premises.

Value of New Buildings Other Than Dwellings Completed^(a), South Australia

Type of Building	1963	1964	1965	1966	1967
			\$'000		
Shops	6,062	3,990	6,228	3,647	4,133
Hotels, hostels, etc.	2,016	1,968	2,733	3,959	2,340
Factories	10,512	17,528	20,201	11,510	12,271
Office premises	4,334	4,440	5,903	2,844	8,870
Other business premises	4,440	5,232	7,634	5,367	7,026
Entertainment and recreation ...	1,030	1,418	1,815	2,103	1,448
Educational	10,438	9,072	10,665	15,374	17,006
Religious	1,372	1,204	2,813	1,923	971
Health	1,984	5,714	3,777	6,166	9,020
Miscellaneous	2,904	3,722	4,488	3,931	2,805
Total	45,092	54,288	66,257	56,824	65,890

(a) Includes alterations and additions of \$10,000 and over to existing buildings.

New Houses—Material of Outer Walls

A plentiful supply of clay and building stone together with a paucity of suitable timbers has resulted in the majority of South Australian houses being of solid construction. In the table below new houses have been classified by the materials used in the outer walls.

New Houses: Material of Outer Walls, South Australia

Year	Brick, Concrete, Stone		Brick Veneer and Stone Veneer		Fibro-Cement		Other	
	Number	Value	Number	Value	Number	Value	Number	Value
		\$'000		\$'000		\$'000		\$'000
COMMENCED								
1963	8,453	60,610	1,469	9,360	560	3,012	52	350
1964	7,892	60,292	2,985	18,778	605	3,454	42	374
1965	6,247	52,850	3,314	20,964	604	3,481	32	274
1966	5,780	50,174	2,922	19,649	549	3,398	19	130
1967	4,598	43,150	2,091	15,472	557	3,636	55	333
COMPLETED								
1963	8,631	60,484	1,068	6,488	560	3,052	57	372
1964	8,475	63,212	1,740	11,144	614	3,450	40	342
1965	7,101	57,458	2,825	18,007	638	3,679	33	299
1966	5,990	52,032	3,506	23,147	579	3,492	20	139
1967	5,060	46,534	2,634	18,380	594	3,919	47	299

The use of brick veneer in house building has increased from 10 per cent of commencements when first recorded in 1962, to 32 per cent in 1965, and has fallen slightly to 29 per cent in 1967. The majority of brick veneer houses are built by the South Australian Housing Trust.

Location of New Dwellings

In recent years the greatest development has occurred in the Municipalities of Salisbury and Tea Tree Gully; during the three years 1965 to 1967 new dwellings in these areas accounted for almost 20 per cent of the total State completions. Of the country local government areas Whyalla has recorded the greatest number of completions each year since 1959.

Location of New Houses and Flats Completed, South Australia

Local Government Area	1963	1964	1965	1966	1967
Brighton	204	240	315	170	129
Burnside	322	449	533	352	337
Campbelltown	657	846	668	595	518
Elizabeth	(a)	(a)376	446	107	225
Enfield	713	895	729	695	353
Glenelg	107	223	230	149	146
Henley and Grange	157	235	230	200	91
Marion	634	731	507	384	380
Meadows	57	69	79	92	97
Millicent	68	38	67	112	70
Mitcham	481	583	745	582	461
Mount Gambier Municipality	151	117	91	77	126
Munno Para	954	545	662	727	370
Murray Bridge	31	45	70	99	85
Noarlunga	547	541	500	527	605
Payneham	138	207	296	119	129
Port Adelaide	363	469	312	170	263
Port Lincoln Municipality	57	75	111	117	101
Salisbury	(a)1,587	(a)1,661	1,276	1,454	1,078
Stirling	68	82	74	79	73
Tea Tree Gully	787	917	1,096	1,200	580
Unley	139	177	451	274	205
West Torrens	623	422	621	625	435
Whyalla	276	307	511	634	682
Woodville	690	503	478	421	284
Other	1,321	1,395	1,648	1,741	1,829
Total State	11,132	12,148	12,746	11,702	9,652

(a) From July 1964 Elizabeth Corporation and Salisbury Corporation separately incorporated : previously combined as Salisbury and Elizabeth District Council and earlier as Salisbury District Council.

Building Employment

Details of building employment in South Australia are given in the next table. The figures are an average of the number of persons employed on four days in the year, viz at the end of March, June, and September and in mid-December. They include all contractors and sub-contractors, and employees of contractors, sub-contractors and government instrumentalities, who on these four days were engaged on the construction, alteration, repair and maintenance of buildings, but exclude persons working on owner-built houses or for contractors or sub-contractors who undertake only alterations, additions, repairs, and maintenance. Persons 'actually engaged' include those temporarily laid off because of weather. Some duplications may occur as a result of frequent movement between jobs or because some persons (such as electricians) may work on several jobs which are under construction simultaneously.

The average employment figure of 12,409 for 1967 was the lowest recorded since 1958 and was made up of 5,978 persons working on new private dwellings, 4,471 working on other new buildings and 1,960 employed on additions, alterations, repairs and maintenance.

Building Employment, South Australia

Classification	1963	1964	1965	1966	1967
Persons Engaged					
Occupational status :					
Contractors	690	694	696	663	647
Sub-contractors	2,959	3,469	3,543	3,164	2,900
Wage-earners	9,852	10,506	10,746	9,747	8,862
Trade :					
Carpenters	3,586	3,808	3,873	3,595	3,299
Bricklayers	2,356	2,589	2,573	2,244	1,983
Painters	1,252	1,415	1,413	1,283	1,116
Electricians	748	759	800	782	705
Plumbers	1,202	1,315	1,335	1,233	1,090
Builders labourers	1,884	1,997	2,102	1,895	1,697
Other	2,473	2,786	2,889	2,542	2,519
Total	13,501	14,669	14,985	13,574	12,409

THE SOUTH AUSTRALIAN HOUSING TRUST

The South Australian Housing Trust was constituted by Act of Parliament in 1937. It provides houses and flats for rental and houses for sale.

Rental Dwellings

When the Trust commenced operations in 1937 it was confined by legislation to the building of houses for rental only which severely restricted the capital cost per house in order to keep the rents within the means of lower paid workers. For this reason the Trust for many years built only the double unit attached type of dwelling although subsequent legislation made possible the building of single unit houses for letting. When the statutory limitations upon the cost and rent of houses were extended, and then removed, larger and better appointed houses were built.

During 1966-67 the Trust completed 1,175 houses for letting, most of which were of double unit construction.

Since 1952 the Trust has built a number of flats most of which are in two- and three-storey blocks and let to married couples without young children or to people living alone. At 30 June 1967, 1,365 flats of this type had been completed. In 1953 the Trust began building small groups of cottage flats for elderly people and had completed 1,462 by 30 June 1967, 560 of these had been built for charitable organisations and the remaining 902 were being let by the Trust. To meet the requirements of persons without children who can afford to pay a rent higher than that charged for a cottage flat but less than the rent charged for a flat in a two- or three-storey building the Trust has built 54 single-storey villa flats.

Sale Houses

The Trust began building houses for sale in 1946.

At first, purchasers were required to pay the purchase price either from their own resources or by obtaining a mortgage from a financial institution. However, in 1952 the Trust established a scheme under which it advances an amount on second mortgage. During the year ended 30 June 1967, 718 for sale houses were completed under this scheme. In 1962 a further scheme was introduced whereby certain houses, known as rental-purchase houses, are made available on \$100 deposit under agreement for sale and purchase.

A variety of sizes and designs are offered for sale, generally grouped on Trust land although the Trust will build any of its standard designs on private land anywhere in the State. It also erects houses for primary producers, and between 1946 and 1962 completed 932 houses for settlers under the War Service Land Settlement Scheme. When requested by State Government departments, the Trust erects houses for purchase by these departments for the accommodation of their employees.

Details of dwellings completed by the Trust since its inception, both for rent and for sale, are given in the following table.

South Australian Housing Trust, Number of Dwellings Completed^(a)

Period	Houses		Flats		Rural Dwellings including Soldier Settlers	Total
	Single Units	Double Units ^(b)	Cottage Flats	Other		
1937-1962 ..	22,357	(c)18,425	808	1,207	1,229	44,026
1962-63	1,289	1,394	126	69	4	2,882
1963-64	1,779	942	81	55	1	2,858
1964-65	2,465	714	93	45	—	3,317
1965-66	2,469	588	140	53	—	3,250
1966-67	2,292	722	214	—	—	3,228
Total ..	32,651	22,785	1,462	1,429	1,234	59,561

(a) Excludes emergency and temporary dwellings.

(b) Number of individual dwelling units.

(c) Includes a small number of triple-units.

In its early years the Trust built small groups of houses with rental and sale houses generally in different locations. With the extension of its activities, however, the Trust has had to build much larger housing complexes including what amounts to a complete town at Elizabeth where rental and sale houses are intermixed. Both because of its emphasis on providing housing for those working in industry and because it has the power, subject to the Industries Development Committee, to erect and lease factories, the Trust has played an important role in the location of industry in South Australia.

Most of the funds used to finance the building operations of the Trust are borrowed either from the State Government under the Commonwealth-State Housing Agreement or from semi-government raisings arranged in conjunction with the State Treasury. Details of funds employed, and of the revenue and expenditure of the Trust in recent years are given on page 531.

COMMONWEALTH-STATE HOUSING AGREEMENTS

In July 1953 the State Government became party to an agreement already existing between the Commonwealth and certain other States under which the Commonwealth Government makes substantial loans to the States for the provision of housing. The initial agreement was renewed in 1956, 1961 and again in 1966 for a further five years.

Under the present agreement the Commonwealth makes advances to the State for the erection of dwellings by the South Australian Housing Trust and for the provision of finance for home builders by means of loans through the Home Builders Fund, to the State Bank and certain building societies. At least 30 per cent of the funds provided must be channelled through the Home Builders Fund. The advances with interest are repayable by the State over fifty-three years.

A total of \$190,179,000 had been loaned to the State under these agreements to 30 June 1967 providing for a total of 32,954 dwellings to 30 June 1966.

Commonwealth-State Housing Agreement, South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Advances for year:					
Housing Trust	10,030	9,200	10,000	10,200	10,000
Home Builders Fund	8,982	10,200	10,500	10,857	10,750
Total	19,012	19,400	20,500	21,057	20,750
Liability at end of year:					
Housing Trust	73,836	82,456	91,801	101,270	110,452
Home Builders Fund	30,554	40,569	50,807	61,332	71,680
Total	104,390	123,025	142,608	162,602	182,132

DEPARTMENT OF HOUSING

The Commonwealth Department of Housing was established in January 1964. The principal activities of the Department in South Australia are the administration of the War Service Homes Act and the recently created Homes Savings Grant Scheme.

War Service Homes

The War Service Homes Branch of the Department of Housing originated in the War Service Homes Commission which was set up in 1919 to help provide homes for ex-servicemen and their dependants.

Persons currently eligible for assistance include members of the Australian forces and nursing services who served outside Australia in the 1914-18 war, the 1939-45 war, in Korea, Malaya or Vietnam (southern zone) or in other areas as specified from time to time by the Commonwealth Government. Also eligible are other British ex-service personnel who were resident in Australia prior to enlistment and certain members of the mercantile marine services. Assistance may be granted to the widow or, in some cases, the widowed mother of an eligible person.

Assistance is given in building a home, in purchasing a new or existing home, and in discharging a mortgage which has been arranged with the prior approval of the Branch. In certain circumstances a person who has not received the maximum loan may receive a further loan to undertake certain additions. The maximum loan available at 30 June 1967 was \$7,000 and the interest rate 3½ per cent.

Services provided by the Branch to persons building a home include the preparation of plans and specifications and the arranging and supervision of construction.

Funds used by the War Service Homes Branch are made available from Commonwealth Consolidated Revenue.

War Service Homes Branch, South Australia

Year	Activities During Year		Advances Outstanding at End of Year	
	Homes Provided	Capital Advanced	Number	Amount
		\$'000		\$'000
1962-63	889	6,470	15,481	65,470
1963-64	695	5,078	15,718	67,900
1964-65	752	5,510	16,008	70,564
1965-66	847	6,200	16,577	74,117
1966-67	566	4,150	16,693	75,402

Homes Savings Grants

Under the Homes Savings Grant Scheme introduced in 1964, married persons and widowed persons under thirty-six years of age who have lived and saved in Australia for at least three years may become eligible for a grant of \$500 to assist them in obtaining a home. To be eligible for the maximum grant a couple must have saved \$1,500 in an acceptable form and have entered into a contract for the purchase or construction of a dwelling on or after 2 December 1963 or, if an owner-builder, have commenced construction on or after that date. Persons who have saved less than \$1,500 may qualify for a reduced grant. Moneys already expended on the purchase of land or on the purchase or construction of a dwelling may be included in acceptable savings. An application for a grant must be lodged not later than twelve months after signing a contract or commencing to build, however, in special circumstances an application lodged after twelve months will be considered.

A total of 8,230 homes savings grants had been approved in South Australia to 30 June 1967, the total payment of \$3,555,000 representing an average of \$432 per grant.

OTHER HOME FINANCE SOURCES

The State Bank of South Australia advances funds provided by the State Government under the Advances for Homes Act, 1928-1958, funds provided from the Home Builders Fund, and its own funds.

The Savings Bank of South Australia advances its own funds either as Homes Act loans guaranteed by the State Treasurer or on its own terms.

Homes Act loans are also arranged by the South Australian Superannuation Fund, in addition to loans on its own terms.

The Commonwealth Savings Bank and the private savings banks make long-term housing advances.

At 1 October 1967 maximum loans available from the above institutions varied from \$6,000 up to \$9,000, with differing rates for new and existing houses and for solid and timber frame construction. Interest rates charged ranged from 5 per cent to 6½ per cent and periods of repayment from fifteen to forty years.

The private trading banks make overdraft advances, dependent on the credit status of the borrower, for short periods normally not exceeding five years. Interest rates on these advances varied between 6 per cent and 7½ per cent.

Life assurance companies make housing loans which are normally collaterally secured by a life assurance policy. Maximum loan limits vary considerably between companies but in general are higher than those offered by the banks. Maximum repayment terms are for up to thirty years and interest rates at 1 October 1967 varied between 6½ per cent and 7½ per cent.

Another source of housing finance is the building societies, details of which are given on pages 564-5. One such society makes Homes Act loans and together with another society advances moneys made available from the Home Builders Fund.

Housing Loans Insurance Scheme

The Housing Loans Insurance Corporation was established by the *Housing Loans Insurance Act* 1965, assented to on 4 May 1965 to insure approved lenders against losses arising from the making of housing loans. The main purpose of the activities of the Housing Loans Insurance Corporation is to assist people to obtain, as a single loan and at a reasonable rate of interest, the money they need and can afford to borrow to obtain a home suited to their requirements.

The Housing Loans Insurance Corporation insures loans that are made for a wide range of purposes in addition to the purchase or construction of a dwelling. The other purposes include alterations, extensions or improvements to a dwelling, and the provision or improvement of roads, kerbing and footpaths. An insured loan may be made only by an approved lender. The approved classes of lenders include banks, building societies, co-operative housing societies, friendly societies, life insurance companies and trustee companies.

During 1966-67, the first full year of operation, 342 housing loans aggregating \$2,547,000 were insured in South Australia.

PART 9

PRODUCTION

9.1 RURAL INDUSTRIES

Rural statistics are prepared from annual returns collected from every holding of one acre or more, used for the production of agricultural products or the raising of livestock (including poultry) and the production of livestock products.

Returns are collected from some 29,000 holdings in South Australia each year. Particulars relate to rural operations for one complete year ended 31 March but where harvesting of some crops (mainly fruit) has not been completed by that date, returns are collected shortly afterwards.

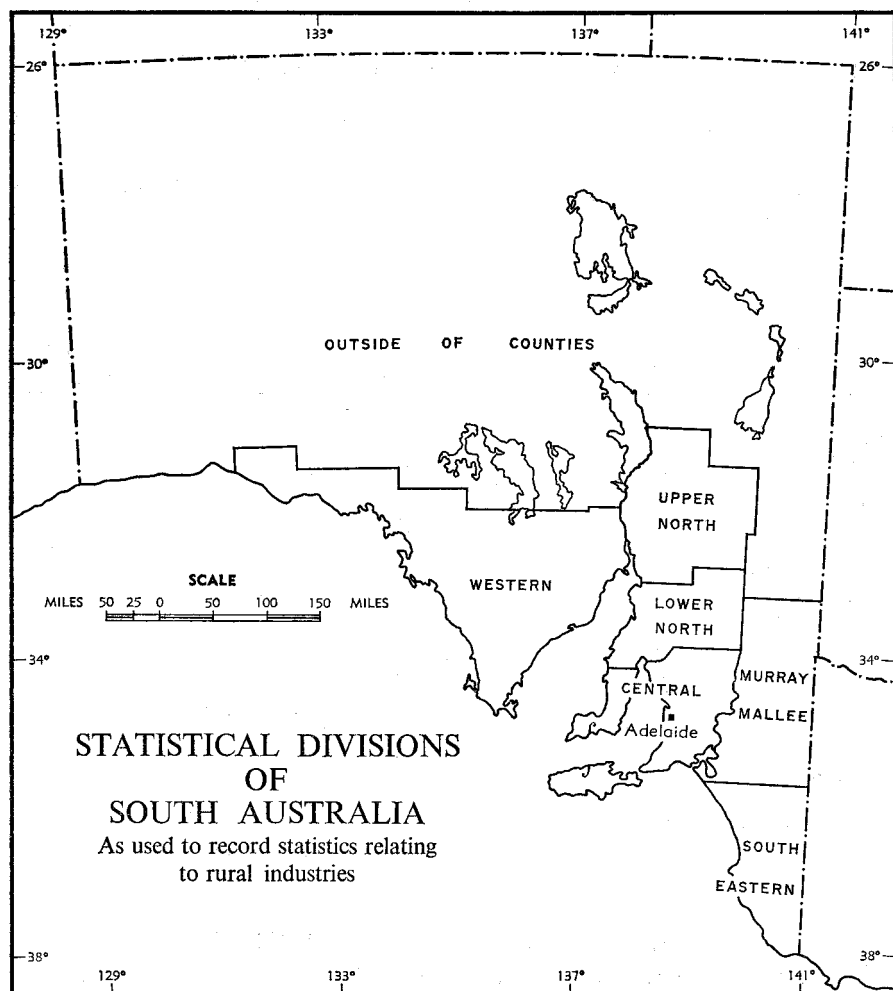
An owner or occupier who works more than one holding is normally required to report details for each holding. However, where the holdings are near to one another and are in effect worked as one farm, a composite return is obtained, and is treated as covering a single holding in the district in which the main farm is situated.

Statistical divisions used for rural production statistics are shown on Map 9. These divisions are a combination of a number of counties which are proclaimed areas with immutable boundaries. The area beyond the counties is for all practical purposes treated as a seventh division. These divisions should not be confused with statistical divisions referred to in relation to other statistics; such divisions, as shown in the detailed map inside the back cover, are based on combinations of local government areas.

The number and area of holdings in each division for the past three years are shown in the following table.

Rural Holdings, Statistical Divisions, South Australia

Statistical Division	Holdings			Area of Holdings		
	1964-65	1965-66	1966-67	1964-65	1965-66	1966-67
	Number			'000 Acres		
Central	12,603	12,642	12,816	5,770	5,821	5,845
Lower North	3,252	3,244	3,228	4,953	5,010	4,945
Upper North	1,189	1,172	1,152	9,292	9,291	9,359
South Eastern	4,285	4,273	4,279	5,429	5,434	5,419
Western	2,416	2,440	2,434	18,172	18,168	18,153
Murray Mallee	4,856	4,837	4,896	8,251	8,132	8,066
Outside of Counties ..	153	151	152	105,087	107,538	109,723
Total	28,754	28,759	28,957	156,954	159,394	161,510



MAP 9

A classification of rural holdings by size and by type of main activity was made in 1966. The following table gives a summary of all rural holdings, those under wheat, barley, and oats and those carrying sheep and cattle classified by area of the holding in 1965-66.

Classification of Holdings by Size and Principal Activities, South Australia 1965-66

Size of Holding Acres	Total Holdings	Holdings with					
		Wheat for Grain	Barley for Grain	Oats for Grain	Sheep	Dairy Cattle	Beef Cattle
		Number					
1- 99 ...	10,750	261	225	85	1,274	2,441	735
100- 199 ...	2,054	210	178	124	850	1,189	437
200- 499 ...	3,072	1,303	724	552	2,199	1,518	851
500- 999 ...	3,930	2,447	1,773	1,339	3,607	1,684	1,369
1,000-1,999 ...	4,253	2,811	2,248	1,914	4,039	1,637	1,809
2,000-4,999 ...	3,083	2,175	1,594	1,468	2,907	1,071	1,317
5,000 and over.	1,617	889	520	616	1,496	506	771
Total	28,759	9,796	7,262	6,098	16,372	10,046	7,289

The classification of holdings by type of main activity is based on estimates of gross receipts of each activity made by allocating values to areas of crops and livestock numbers reported on the returns submitted for the year ended 31 March 1966.

The following table gives a summary of the type of activity of rural holdings in each statistical division.

Rural Holdings Classified by Type of Activity, South Australia, 1965-66

Type of Activity	Statistical Division							Total
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee	Outside of Counties	
	Number of Holdings							
Commercial holdings:								
Sheep—Cereal grain	1,749	1,334	404	342	1,661	1,245	—	6,735
Sheep	1,221	204	317	2,055	151	178	103	4,229
Cereal grain ..	517	843	139	8	318	151	—	1,976
Beef cattle ..	85	6	7	162	2	14	39	315
Dairying	2,060	107	16	793	9	201	—	3,126
Vineyards	456	43	—	4	—	1,093	—	1,596
Fruit (other than vine)	689	21	8	3	2	870	—	1,593
Vegetables; Potatoes ..	175	—	3	18	—	—	—	196
Other and mixed ..	857	42	21	7	—	98	—	1,025
Poultry	299	19	5	6	5	24	—	358
Pigs	108	27	5	18	22	19	1	200
Other	14	4	1	9	—	—	—	28
Multi-purpose ..	737	147	42	143	40	210	—	1,319
Total classified ..	8,907	2,797	968	3,568	2,210	4,103	143	22,696
Unclassified:								
Sub-commercial ..	2,181	323	117	431	97	381	1	3,531
Unused, special, etc.	1,554	124	87	274	133	353	7	2,532
Total holdings	12,642	3,244	1,172	4,273	2,440	4,837	151	28,759

HISTORY OF FARMING DEVELOPMENT

The first moves away from Adelaide occurred very soon after the settlement was established. Delays in having the country surveyed had prevented the

planned occupation of farm lands and some of the more determined settlers made for the country in an attempt to make a living from the land. Because these settlers had come from a green, well-watered land and because the country to the north of Adelaide seemed to be too dry and dusty for cultivation, the first moves were to the hills districts near Mount Barker and the fertile southern areas of Strathalbyn, Willunga and Yankalilla. In these first few years large numbers of sheep and cattle were imported from New South Wales and a considerable part of the present settled area of the State had been occupied for pastoral purposes by 1850.

When the demand for grain increased there was a move to farm additional areas. With no equipment other than hand tools, clearing virgin land was a formidable task. Because it carried light bush and little timber and was handy to the port facilities at Adelaide, the plain country centred on Gawler was the next area opened to farming. The production of excellent crops on these plains led to the opening of large tracts of land north as far as Port Augusta. By 1860 farming was established in the South East and had commenced in lower Eyre Peninsula. The sheep population had reached nearly 3 million.

The country in Central, Lower North, Upper North and South Eastern Divisions was being developed and most of the rich wheat areas in Central, Lower North and Upper North had been occupied by 1880. Large areas of this land were heavily timbered with mallee eucalypt which has a large root system, the clearing of which presented a major problem to the farmers. The introduction of the techniques of flattening the scrub with large rollers made from old steam boilers, burning this scrub, sowing a scratch crop and then burning the stubble to kill regrowth enabled this land to be opened up. Two inventions were of importance—the stump-jump plough which made tilling on this land possible and the mechanical reaper which made large-scale farming economical.

By 1900 all but three of the counties had been declared but the settlement on new farming lands between 1880 and 1900 was not significant. However, the next twenty years saw a considerable extension of the cultivated areas, despite a disastrous drought experienced in 1914. In this period the area under crop and lying fallow increased by 50 per cent. The areas developed were mainly the difficult light soils of the Murray Mallee and Eyre Peninsula. The influence of farmers leaving the low rainfall northern counties and taking their experience of farming under marginal conditions to these two areas together with the wide acceptance of the need for artificial fertiliser in cereal farming produced the marked success which followed. In 1901 artificial fertiliser was used on only 37 per cent of the area cropped while in 1920 the figure was 87 per cent.

The very high prices obtained for agricultural products after the 1914-18 War and the Government drive for greater production resulted in the opening up of extensive areas of mallee lands. The area under cultivation reached a peak of 8 million acres in 1930 but within two or three years it was realised that the type of crop-fallow rotation in general use was seriously damaging the light soils of these 'marginal' farming areas and by 1935 the area under cultivation had been reduced to 7.3 million acres. Sheep numbers increased steadily from 6 million to 10 million in the 1930s.

The 1939-45 War had a very marked effect on the area under cultivation, which fell to 4.5 million acres in 1943-44 and the drought of the following season caused sheep numbers to fall to less than 7 million. From this time, modern farming techniques were applied. Mixed sheep-cereal farming was rapidly extended, crop-pasture and crop-pasture-fallow rotations were widely adopted,

and large areas of marginal mallee lands brought into economic production. Improved strains of cereals were introduced and larger quantities of superphosphate used on cereals and pastures. By these means the area under cultivation today has reached 12 million acres and the number of sheep now exceeds 17 million. The increased production obtained since 1940 has come from the adoption of better farming methods rather than the opening of new land.

CHARACTERISTICS OF FARMING AREAS

GEOGRAPHY AND CLIMATE

Two thirds of the area of the State, from the northern boundary down to latitude 32°S, is mainly desert and unsuitable for agriculture. The rainfall is low and erratic, coming mainly from thunderstorms, and averages less than 8 inches per annum. High day temperatures during a large part of the year produce a very high rate of evaporation.

South of latitude 32°S is an area where the rainfall is rather more regular and somewhat higher; this land, mostly semi-arid, is transitional between the desert and the agricultural regions. Small areas are planted to cereals and extensive areas adjacent to the River Murray are irrigated from the waters of the river and devoted to horticulture and viticulture.

A third region extending as far as latitude 36°S enjoys an average annual rainfall varying according to locality between 10 and 25 inches per year and has a reliable growing season of five months or more. This is the main agricultural region of the State and much of the area is devoted to ley farming, producing wheat, barley, oats, fruit and vegetables and carrying sheep and cattle.

The south-eastern part of the State has a rainfall in excess of 20 inches per year but physiography is not congenial to agriculture, most of the usable area being devoted to grazing and afforestation.

Average Rainfall Over Agricultural Areas

Cereal crops (of which wheat is the most important) are sown following opening rains, which are normally expected in April or May. The growing season varies between districts, but generally can be considered as the eight months April to November, and good rains during this period are vital to the success of the season's harvest.

A further calculation of average rainfall for each county in which a significant amount of crops is grown (33 counties at present) is obtained by taking the mean of recordings at a number of stations spread through the area. An average, weighted by the area under crop in each county, is then calculated for each statistical division, and the entire agricultural area of the State. Details are given in the next two tables.

The average rainfall for the wheatgrowing season fell as low as 6.83 inches in the 1914 drought, 6.28 inches in 1959 and 6.37 inches in 1967. In both the Upper North and Murray Mallee Divisions, average falls of under 5 inches have been experienced. The highest average over the growing season was 18.46 inches in 1909, while in the South Eastern Division the average frequently exceeds 20 inches. A more detailed discussion, together with maps and with special reference to the cereal growing season was included on pages 5-9 of *South Australian Year Book* 1966.

Average Rainfall Over Agricultural Areas, Statistical Divisions, South Australia
Wheatgrowing Seasons

Statistical Division	1962	1963	1964	1965	1966	1967 (p)
	Inches					
Central	11.97	17.59	17.78	11.14	12.41	6.95
Lower North	9.89	16.19	14.75	11.13	10.29	6.05
Upper North	7.46	12.98	12.89	10.09	8.49	6.13
South Eastern	19.44	15.01	25.23	15.55	16.68	8.47
Western	9.62	13.76	15.31	9.74	11.92	6.74
Murray Mallee	7.42	12.91	13.51	9.29	7.54	4.70
Total	10.24	14.93	15.85	10.51	11.09	6.37

(p) Preliminary.

The next table gives a dissection of the State figures shown above for each of the eight months of the wheatgrowing season.

Average Rainfall Over Agricultural Areas, Monthly, South Australia
Wheatgrowing Seasons

Month	1962	1963	1964	1965	1966	1967 (p)
	Inches					
April	0.18	1.76	1.58	0.52	0.24	0.15
May	2.67	3.04	1.31	2.00	1.42	0.78
June	1.34	2.98	1.75	1.34	1.87	0.34
July	0.99	3.14	3.18	1.88	2.41	1.81
August	1.64	1.93	1.45	2.28	1.18	1.74
September	0.88	0.88	2.87	1.24	2.04	1.13
October	2.21	0.93	1.71	0.23	1.22	0.37
November	0.33	0.27	2.00	1.02	0.71	0.04
Total	10.24	14.93	15.85	10.51	11.09	6.37

(p) Preliminary.

CHARACTERISTICS OF STATISTICAL DIVISIONS

In this section, some general details are given regarding soil types and natural vegetation in each statistical division.

Central Division

This division has an area of nearly 6 million acres in rural holdings. The topography, soils and rainfall vary more than in any other part of the State.

The Kangaroo Island and Yorke Peninsula regions are both relatively flat with shallow brown soils over limestone or sand over clay. These soils are loose and coarse and are generally known as mallee soils. On the southern part of Yorke Peninsula are areas of calcareous sands and in the northern parts of Kangaroo Island there are areas of fertile red-brown earths with some areas of deep acid sands. The central area of the division is dominated by the Mount Lofty hills with leached sandy loam overlying a heavy clay and large areas of rocky outcrops or shallow soil over rock, fertile valleys or deep loam grading to red-brown earths on some slopes.

The elevated areas of the peninsula to the south of Adelaide contain large pockets of acid-grey soils, while the northern and eastern portions of the division comprise mainly mallee type soils and red-brown earths. Natural vegetation varies from red gums, blue gums, peppermints, sheoaks and many types of shrubs and grasses on the Mount Lofty hills to savannah regions adjacent to the hills area. Mallee type eucalypt, scattered areas of shrub and various species of annual and perennial grasses are native to the remainder of Central Division.

The combination of suitable soils, climate and rainfall and the provision of reticulated water in an area in close proximity to Adelaide has led to the development of vegetable, fruit and dairying industries in the fertile valleys and undulating country associated with the Mount Lofty hills. Yorke Peninsula is the main barley growing area in Australia, and wheat is grown extensively in all areas except Kangaroo Island and the higher rainfall areas near and to the south of Adelaide. Sheep are grazed generally throughout Central Division.

Lower North Division

This is the smallest of the six divisions with some 5 million acres in rural production. The western and south-western portions are coastal plains, for the most part mallee soils of all types—sandy, grey, loamy and shallow red. The central area is undulating hill country with open valleys and associated flats; the hills have large areas of shallow soils and rock outcrops while the valleys and flats are mostly red-brown earth, sandy and loamy mallee soils with some heavy brown soils. The lightly undulating plains in the eastern section are mainly mallee soils.

The hill or range country was originally open grassland with savannah woodland in the wetter areas. The coastal plains were covered with mallee eucalypt, native shrubs and grasses while the eastern plains carried some low mallee scrub.

Lower North Division produces 20-25 per cent of the grain grown in the State. The range country is largely unimproved and is used for grazing sheep on natural grasses. Most of the studs which produce the South Australian type Merino sheep are located in this area.

Upper North Division

The whole of the division containing 9 million acres in rural holdings is dominated by the Flinders Ranges, grading from precipitous slopes with little if any topsoil in the north, to hill country in the south. This hill country changes through undulating country to the semi-arid plateau of the interior.

Because the rainfall is low and the evaporation rate high most of the area which is not precipitous is used for grazing and cannot be used for agriculture. Only in parts of the south-western quarter is the rainfall sufficient for the growing of wheat.

South Eastern Division

With over 5 million acres devoted to rural production this is the second smallest division. The area is characterised by many ranges of low hills or dunes, lying parallel to the coast, but merging into the east-west pattern of the dunes further north. Deep sands are often associated with these hills which usually have a limestone base or core. Large areas of copper-deficient and zinc-deficient soils have been made productive by the use of these trace elements in

plant fertilisers. This previously unproductive land is now carrying large numbers of livestock and producing excellent crops. In the southern half of the division, considerable areas of dark soils occupy the plains between the ranges and because the ranges are parallel to the coast with virtually no natural drainage, these areas usually have a high water table. This combination led to considerable submerging of the land in winter and extensive artificial drainage has been needed to control the level of the water table to permit cropping and the cultivation of pastures. Near the coastline extensive sand dune formations of low fertility render large tracts of land completely unproductive.

The natural vegetation of the northern regions is mainly mallee eucalypt with yacca, broombush and banksia. The higher rainfall areas to the south produce red, blue and swamp gums with native grasses, while white tussock and wallaby grass occur in some areas.

The country is mainly devoted to grazing, nearly 40 per cent of the improved pasture in the State being in the division. Sheep grazing is fairly general throughout, while beef cattle and dairy cattle are concentrated mainly in the southern portion. The area under crop is only about 5 per cent of the total area cropped in the State.

Western Division

This is by far the largest division with over 18 million acres devoted to rural production. A large part has mallee type soils mixed with small areas of heavier loams. There is a dune system along large tracts of the western coastline grading to limestone inland of the dunes. In the southern extremity of Eyre Peninsula are large areas of sandhills. In the south-eastern section there are considerable areas of red-brown soils, with in many cases ironstone gravel in the topsoil. The north-eastern section of the division is mainly desert relieved only by the Middleback Ranges consisting for the most part of hard sandstone.

The natural vegetation is predominantly mallee eucalypt and sheoak with scattered sugar gums and native pines on the hills. Broombush is found in places on mallee soils. Speargrass and spinifex grow on the coastal sand dunes and the arid north-eastern desert carries scattered mulga with saltbush and bluebush.

Although yields are moderate, the large area under cultivation produced 36 per cent of the State's total harvest of cereals for the 1966-67 season, with wheat being the main crop. The major pastoral activity is sheep grazing.

Murray Mallee Division

This division has 8 million acres used for rural production. A large part of the area is undulating, with sandy rises and firmer sandy or sand-loam flats. The rises run roughly east-west following the direction of the prevailing winds. Near the River Murray there are shallow brown soils over limestone while in the southern parts the soils are mainly mallee types. The natural vegetation is predominantly mallee eucalypt with scattered patches of native pines and sheoaks.

The main crops are wheat and barley with small areas of oats grown for forage and cereal rye for soil stabilisation. Because the growing season is short and rainfall light and erratic, most of the area cropped in the northern regions is wheat, with most of the barley being grown in the southern section. Irrigation areas are scattered along the River Murray, in many cases extending no further than two or three miles from the river. About one half of the area of orchards and vineyards in the State is concentrated in these irrigated areas.

The division carries about 10 per cent of the sheep and dairy cattle, the sheep being grazed throughout the area and the dairy cattle being concentrated along the flood flats of the Lower Murray.

Outside of Counties

The whole area is fairly flat with low mountains or mountain ranges intruding in three or four places. The soils are varied in character, sometimes capable of growing vegetation but unproductive in the absence of adequate rainfall. In this region are found the thin red soils of the Nullarbor Plains, the desert sand hills, the gibber deserts, the sand plains and the spinifex areas.

Approximately 75 per cent of the area of the State is 'Outside of Counties' and no part of this area receives an average annual rainfall of more than 8 inches. Not only is the rainfall low but it is quite irregular and large areas receive no useful falls for very long periods. High daytime temperatures experienced over a large part of the year cause rapid surface evaporation.

The native vegetation consists of those species which have become adapted to the climatic conditions of the region. The trees are scattered mulga with some native pines on the hills and areas of saltbush and bluebush. The few annual plants which are found have very rapid life cycles, being quick flowering and producing large quantities of seed. Large areas of the north-west and north-east are almost devoid of vegetation, being merely sand or gibber deserts.

The region cannot support any agriculture but an area of more than 100 million acres is leased for pastoral purposes and carries about 100,000 beef cattle and one million sheep.

RURAL POPULATION

The number of persons of all ages residing permanently on rural holdings in South Australia in March during the past ten years is shown in the following table. These figures include those temporarily absent at the time, but exclude visitors, etc. Rural population has remained fairly stable during the ten year period, while the State population has risen by almost 25 per cent.

Persons Permanently Resident on Rural Holdings, South Australia

At 31 March

Year	Males	Females	Persons	Year	Males	Females	Persons
1958....	58,061	50,901	108,962	1963	58,668	51,825	110,493
1959....	57,989	51,087	109,076	1964	58,510	51,854	110,364
1960....	58,889	52,320	111,209	1965	58,016	51,361	109,377
1961....	59,098	52,245	111,343	1966	57,932	51,298	109,230
1962....	59,441	52,243	111,684	1967	58,028	51,270	109,298

RURAL EMPLOYMENT

In the following table particulars are given of permanent and temporary rural employment and salaries and wages paid during the last five years. The figures include male and female workers. Females engaged mainly in domestic duties are excluded from the table.

Rural Employment and Wages, South Australia

At 31 March

Particulars	1963	1964	1965	1966	1967
Persons					
Permanent workers:					
Owners, lessees, etc.	24,766	24,270	23,850	23,560	22,993
Relatives (not paid wages) ..	2,109	1,600	1,369	981	712
Employees	8,350	8,769	8,703	8,565	8,398
Total	35,225	34,639	33,922	33,106	32,103
Temporary workers	18,821	17,835	16,294	15,763	16,178
Total workers	54,046	52,474	50,216	48,869	48,281
\$'000					
Salaries and wages (a):					
Permanent workers	12,567	13,339	13,976	14,503	15,225
Temporary workers	9,566	10,018	11,110	11,473	12,399
Total	22,133	23,357	25,086	25,976	27,624

(a) During year ended 31 March.

FARM MACHINERY

Particulars of farm machinery on rural holdings in South Australia for each of the last six years, and in each statistical division at 31 March 1967 are given in the next two tables.

Farm Machinery on Rural Holdings, South Australia

At 31 March

Type of Machine	1962	1963	1964	1965	1966	1967
Shearing machines :						
Machines	14,532	14,595	14,885	15,172	15,386	15,392
Stands	27,278	27,528	28,149	28,844	29,291	29,343
Milking machines :						
Machines	7,707	7,553	7,438	7,328	7,040	6,634
Units	18,831	18,836	19,057	19,135	18,833	18,143
Rotary hoes and rotary tillers	4,873	4,989	5,260	5,670	5,883	5,442
Tractors :						
Wheeled	28,289	28,497	29,841	30,772	30,984	32,507
Crawler	3,499	3,174	3,390	3,392	3,014	3,322
Grain drills :						
Combine	15,221	15,251	15,284	15,617	15,589	15,489
Other	4,865	5,065	5,074	5,168	5,201	4,793
Fertiliser distributors	8,271	8,213	8,413	8,743	8,893	9,166
Harvesters, headers and strippers	12,831	12,677	12,652	12,659	12,393	11,597
Forage harvesters	525	645	660	701	764	765
Pick-up balers	3,534	3,791	4,149	4,270	4,609	4,760

Farm Machinery on Rural Holdings, Statistical Divisions, South Australia
At 31 March 1967

Type of Machine	Statistical Division						Total
	Central	Lower North	Upper North	South Eastern	Western (a)	Murray Mallee	
Shearing machines:							
Machines	4,557	2,507	977	3,045	2,470	1,836	15,392
Stands	7,690	4,671	2,022	6,192	5,400	3,368	29,343
Milking machines:							
Machines	3,439	816	198	1,351	302	528	6,634
Units	9,724	1,605	352	4,505	484	1,473	18,143
Rotary hoes and rotary tillers ..	2,858	600	191	529	369	895	5,442
Tractors:							
Wheeled	11,434	4,212	1,217	4,639	4,721	6,284	32,507
Crawler	1,193	234	140	556	794	405	3,322
Grain drills:							
Combine	4,689	2,979	826	1,520	3,012	2,463	15,489
Other	1,363	443	80	834	1,106	967	4,793
Fertiliser distributors	3,992	708	127	2,074	994	1,271	9,166
Harvesters, headers and strippers ..	3,394	2,287	581	970	2,456	1,909	11,597
Forage harvesters	301	74	9	177	82	122	765
Pick-up balers	1,820	851	187	1,057	364	481	4,760

(a) Includes Outside of Counties.

AGRICULTURE

Most of the land area of South Australia is arid or semi-arid and cannot be used for agricultural production. This severe natural limitation means that even with modern farming methods only 12 million of more than 150 million acres in rural holdings are devoted to cropping or permanent improved pasture. The area under crop in recent years has been between 5 and 6 million acres. Most of this area is planted to cereals for the production of grain, hay and forage. About 120,000 acres are used for the production of fruit and vegetables.

The numbers of holdings growing twenty or more acres of the principal cereals and one acre or more of the principal fruits and vegetables are shown in the following table.

Rural Holdings Growing Principal Crops, South Australia

Holdings (a)	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
	Number					
With 20 acres or more of:						
Wheat	9,434	9,881	9,902	9,657	9,387	9,419
Barley	7,920	7,146	7,196	6,890	6,688	6,772
Oats	4,174	4,967	5,704	5,034	4,879	5,532
With 1 acre or more of:						
Grapes	2,990	3,056	3,054	3,091	3,082	3,104
Citrus fruits	1,566	1,653	1,686	1,704	1,707	1,674
Other orchard fruits	3,344	3,288	3,280	3,302	3,298	3,253
Potatoes	746	850	692	614	670	674

(a) Holdings growing more than one of the crops shown are counted for each crop.

The cereals wheat, barley and oats sown for grain account for about 80 per cent of the total area cropped in South Australia. Hay and green forage of all kinds exceed 14 per cent and the remainder of the area is devoted mainly to orchards, vineyards and vegetable production. Climatic conditions, particularly the relatively low winter rainfall and the dry hot summer, favour cereal growing; one advantage

being the low incidence of stem rust, a serious disease in the moister areas of the Australian wheat belt.

The area sown to the more important crops during the last five seasons is given in the following table.

Area Sown to Principal Crops, South Australia

Crop	1962-63	1963-64	1964-65	1965-66	1966-67
	'000 Acres				
Grain:					
Wheat	2,595.1	2,802.2	2,726.8	2,744.9	2,960.3
Barley	1,052.9	1,123.1	1,094.7	1,098.1	1,107.0
Oats	415.6	500.6	443.8	454.6	508.8
Rye	29.3	31.3	43.9	36.4	56.6
Hay:					
Oaten	116.3	140.7	110.1	111.8	135.1
Other	171.1	216.9	204.2	186.8	346.7
Green forage	367.4	378.1	462.5	474.0	419.9
Vegetables:					
Potatoes	5.9	5.5	5.3	5.8	5.9
Tomatoes	1.3	1.2	1.0	1.1	1.4
Other	9.9	9.8	9.3	9.7	10.1
Fruit:					
Grapes	58.3	58.7	58.9	58.7	57.1
Oranges	15.3	16.5	17.4	18.3	17.4
Apples	5.9	5.9	6.0	5.9	5.9
Apricots	4.5	4.5	4.7	4.8	4.8
Other	14.7	14.8	14.9	14.9	16.0
Other crops	68.5	70.0	87.0	67.4	83.5
Total area under crop ..	4,932.0	5,379.8	5,290.5	5,293.2	5,736.5

Cereal growing played a significant part in the early development of South Australia. The success of the first crops on the Adelaide plains led to a strong demand for suitable wheat land, but expansion of the cereal industry was halted shortly before 1880 when the downward trend of the average yields brought the realisation that the exploitation of the soil had seriously reduced the level of fertility.

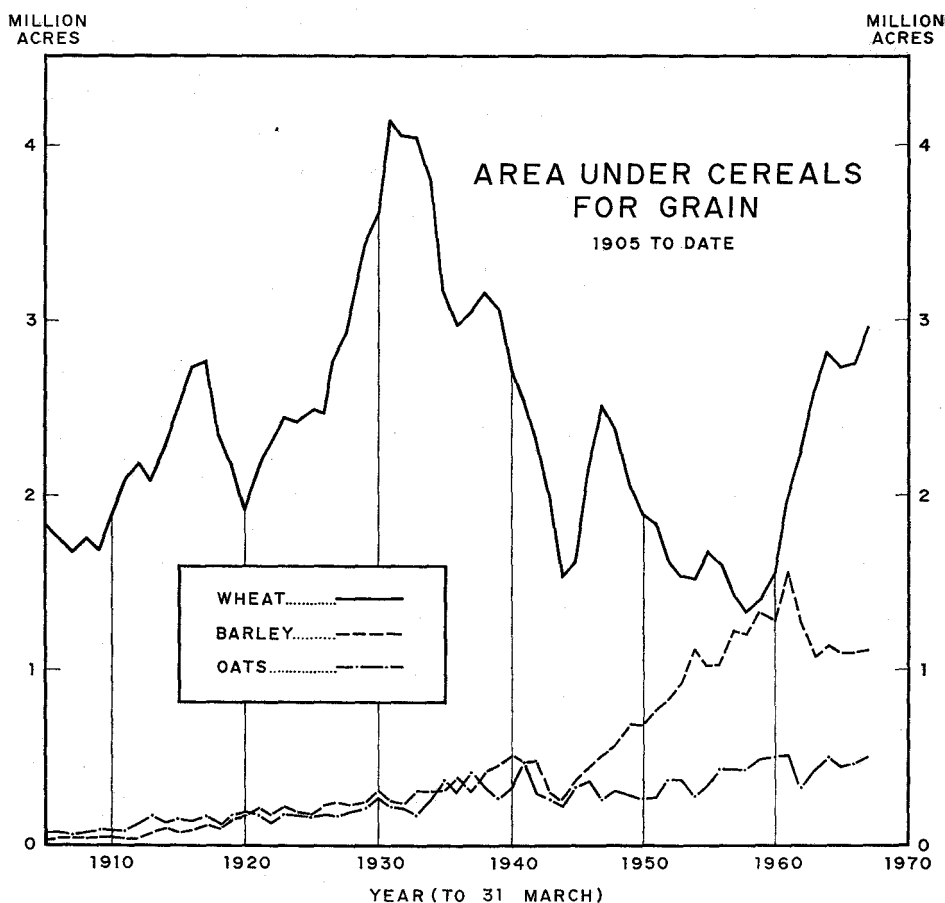
Experiments revealed the deficiency of phosphates in South Australian soils and showed that the application of superphosphate, linked with rotation farming, would revive them. The widespread adoption of this practice at the turn of the century resulted in higher yields and a further expansion of the cereal areas. The following technique was also being used to boost yields but its use failed to replace organic matter consumed causing the deterioration of the soil structure. Furthermore farmers were over-tilling and towards the 1930s wind and water so severely eroded the unprotected soil surface that thousands of acres were laid waste. To overcome the erosion problem, soil conservation services were established. The value of contour cultivating and pasture establishment was demonstrated and subsequently adopted by landholders with considerable success. Also demonstrated was the method of stabilising sandhill drifts by sowing them to cereal rye.

With soil erosion arrested, attention was focused on finding ways of maintaining the natural physical structure of the soil. Research revealed nitrogen as the key factor directly related to soil fertility and this led to the introduction of nitrogen-building legume pastures. Another advance made at this time was the discovery

of trace element deficiencies in certain areas, particularly the manganese deficiency in the soils of Yorke Peninsula and the molybdenum, copper and zinc deficiencies in other parts of the State.

The adoption in recent years of more suitable cropping programmes with the resulting increased yield and profitable association with woolgrowing has firmly established the cereal industry.

The extent of fluctuations since 1905 in the area under the three main cereal crops is illustrated by the following graph.



IRRIGATED CULTURE

The most important irrigation areas are those located in the Murray Valley. A description of the development and types of irrigation schemes along the River Murray is given in Part 8.2 pages 283-5.

The remainder of the areas under irrigation are located mainly in the Central and South Eastern Divisions where irrigation is applied predominantly to vegetables, hay and green forage crops and to pastures.

The main crops are grapes, citrus fruit and stone fruit in the Upper Murray, and green forage and pastures in the reclaimed swamp areas of the Lower Murray. Details for individual areas in 1966-67 are given below.

**River Murray Irrigation Areas^(a): Area and Production of Principal Crops
1966-67**

Name of Area	Area				Production				
	Green Forage and Pasture (b)	Vines		Orchards	Vines			Oranges	Peaches
		For Drying	For Wine		Total Grapes Produced	Grapes Used for Wine	Currants, Sultanas and Raisins Made		
	Acres	Acres	Acres	Acres	Tons	Tons	Tons	'000 Bushels	'000 Bushels
Upper Murray:									
Berri	169	2,400	2,434	3,651	29,327	16,064	3,721	403.2	162.6
Cadell	21	317	189	370	2,019	793	344	42.3	7.5
Cobdogla	62	339	885	92	9,159	7,136	577	6.8	3.2
Cooltong	99	94	319	881	3,327	2,750	165	174.7	28.4
Holder	4	40	224	631	1,394	1,280	31	70.8	16.5
Loveday	375	759	1,342	495	16,232	11,125	1,420	46.5	7.8
Loxton	9	1,313	2,256	3,414	28,997	20,278	2,448	724.7	124.5
Moorook	41	122	241	753	2,488	1,750	211	86.3	26.8
Nookamka	10	693	1,056	300	13,098	8,789	1,207	28.4	3.0
Ral Ral	240	495	245	295	3,787	1,262	721	1.7	18.0
Renmark	788	3,251	2,003	3,654	28,467	11,418	4,859	319.0	279.1
Sunlands	9	—	95	1,578	646	646	—	15.6	23.4
Waikerie	18	139	1,317	3,008	10,291	9,635	167	468.1	138.2
Other	68	474	375	2,516	4,942	2,473	700	161.9	271.2
Total	1,913	10,436	12,981	21,638	154,174	95,399	16,571	2,550.0	1,110.2
Lower Murray:									
Cowirra	690	—	—	—	—	—	—	—	—
Jervois	5,705	—	—	10	—	—	—	0.3	—
Monteith	896	—	—	—	—	—	—	—	—
Mypolonga	1,188	—	6	1,036	55	55	—	153.4	23.8
Neeta	460	—	—	—	—	—	—	—	—
Pompoota	824	—	—	—	—	—	—	—	—
Other	1,771	—	—	21	—	—	—	1.5	0.1
Total	11,534	—	6	1,067	55	55	—	155.2	23.9

(a) Excludes areas and yields of crops grown by irrigation on the River Murray and elsewhere not in the above irrigation areas.

(b) Total within irrigated areas, including non-irrigated forage and pastures.

The following table shows the approximate area of all irrigated culture in South Australia for the seasons 1962-63 to 1966-67. Of the areas shown below, about 70 per cent of orchards, over 80 per cent of vineyards and about 30 per cent of green forage and pastures are in the River Murray Irrigation Areas listed in the previous table.

Area Under Irrigated Culture^(a), South Australia

Season	Orchards	Vineyards	Vegetables	Green Forage	Other Crops	Pasture	Total
				Acres			
1962-63	26,876	27,384	11,548	3,804	10,591	32,610	112,813
1963-64	28,787	27,954	10,541	4,451	12,315	33,822	117,870
1964-65	30,094	28,286	9,917	4,303	14,575	35,964	123,139
1965-66	31,089	28,850	10,665	3,642	12,995	41,594	128,835
1966-67	32,122	28,268	12,341	3,257	20,463	42,306	138,757

(a) Approximations only.

FERTILISERS

Nearly all soils in the agricultural areas of South Australia are deficient in phosphoric acid, and superphosphate is used on both crops and pastures in large quantities to overcome this deficiency. In some areas trace elements, manganese, copper, zinc and molybdenum are added to the superphosphate to rectify the chronic shortage of these elements.

A summary of the area of crops and pastures treated and the quantities of fertiliser used in 1966 is shown in the following table.

Principal Crops and Pasture Fertilised, South Australia 1966

Type of Crop	Area Fertilised	Super-phosphate	Other	Total	Per Acre
	'000 Acres	Tons	Tons	Tons	Cwt
Wheat	2,898	151,732	1,196	152,928	1.06
Barley, oats and rye	1,969	99,983	1,039	101,022	1.03
Vegetables	13	2,807	5,249	8,056	12.07
Fruit trees and vines	56	4,241	7,735	11,976	4.26
Other and unspecified crops	186	12,320	594	12,914	1.39
Total crops	5,123	271,083	15,813	286,896	1.12
Pasture	5,237	308,656	3,256	311,912	1.19
Total	10,359	579,739	19,069	598,808	1.16

The following tables show the area of crops and pastures treated and the quantity of fertiliser used in each division in 1966, and in the State for the years 1957 to 1966.

Use of Artificial Fertilisers, Statistical Divisions, South Australia 1966

Statistical Division	Crops				Pastures		
	Area Fertilised	Proportion of Total Area Cropped	Fertiliser Used	Fertiliser Used per Acre	Area Fertilised	Fertiliser Used	Fertiliser Used per Acre
	'000 Acres	Per Cent	Tons	Cwt	'000 Acres	Tons	Cwt
Central	1,031	85.54	67,088	1.30	1,161	70,589	1.22
Lower North	947	91.30	46,325	0.98	304	14,502	0.96
Upper North	220	89.68	9,093	0.83	32	1,638	1.03
South-Eastern	257	73.52	16,462	1.28	2,674	168,521	1.26
Western (a)	1,717	93.39	94,205	1.10	605	31,694	1.05
Murray Mallee	951	89.28	53,723	1.13	461	24,968	1.08
Total	5,123	89.30	286,896	1.12	5,237	311,912	1.19

(a) Includes small quantities Outside of Counties.

Use of Artificial Fertilisers, South Australia

Year	Crops				Pastures		
	Area Fertilised	Proportion of Total Area Cropped	Fertiliser Used	Fertiliser Used per Acre	Area Fertilised	Fertiliser Used	Fertiliser Used per Acre
	'000 Acres	Per Cent	Tons	Cwt	'000 Acres	Tons	Cwt
1957	3,463	88.63	182,248	1.05	4,005	236,291	1.18
1958	3,692	89.03	192,168	1.04	3,716	218,728	1.18
1959	3,679	90.64	188,733	1.03	3,471	202,895	1.17
1960	4,326	87.11	209,387	0.97	3,300	189,704	1.15
1961	4,063	90.11	206,047	1.01	3,583	198,186	1.11
1962	4,415	89.52	221,011	1.00	3,750	209,551	1.12
1963	4,788	89.01	238,905	1.00	3,993	226,678	1.14
1964	4,775	90.25	254,268	1.07	4,714	274,558	1.16
1965	4,869	91.99	265,132	1.09	5,093	296,830	1.17
1966	5,123	89.30	286,896	1.12	5,237	311,912	1.19

Aerial Agriculture

During recent years increasing use has been made of aircraft for top-dressing and seeding, for spraying of crops and pastures, and for pest and vermin extermination.

The following table shows details of area treated, materials used and flying time for the five years ended 31 March 1967.

Aerial Agriculture, South Australia

Year	Area Treated			Material Used		Flying Time
	Fertiliser and Seed	Sprayed	Total	Super-phosphate	Seed	
		'000 Acres		Tons	'000 lb	Hours
1962-63	389	81	470	21,133	56	2,874
1963-64	985	196	1,181	52,305	284	6,890
1964-65	1,181	182	1,363	54,454	748	7,767
1965-66	908	270	1,178	46,392	269	7,056
1966-67	903	372	1,276	46,850	<i>n.a.</i>	7,823

n.a.—Not available.

WHEAT

Wheat has always been a crop of major importance to the economy of South Australia although in recent years this importance has declined in relation to both the value of agricultural and pastoral production and the value of total State production. For the five-year period 1909-10 to 1913-14 wheat averaged 38 per cent of agricultural and pastoral production and 23 per cent of total State production while for the period 1961-62 to 1965-66 the percentages were 23 and 8 respectively. The increase in woolgrowing in the first instance and the rapid industrialisation of the State in the second have been the significant factors in this decline.

The expansion of the wheat industry in the first fifty years of the colony was made possible by the development of the stripper, a machine which considerably reduced the labour and costs of harvesting. For a period South Australia was the largest wheat producing State, but it now ranks fourth in order of importance, and for the ten harvests ending 1965-66 averaged 15 per cent of Australian wheat production.

The first stage of the development of the wheat industry saw a rapid expansion of the wheat area until 1,970,000 acres were sown in 1886-87, yielding for the first time a 10 million bushel harvest. Smaller acreages were then sown until in 1909-10 a second great surge of development began, culminating in the highest recorded area of 4,180,513 acres in 1930-31.

A complete reversal in the acreage trend occurred after 1932-33 due to the impact on the industry of the economic crisis of the 1930s following immediately in the wake of four severe droughts during 1926-29. About this time it was realised that wheat farming had been extended into areas where the inadequate rainfall and unsuitable land made wheatgrowing uneconomic and a number of these properties on 'marginal' lands were abandoned. In 1940 the Marginal Lands Act gave authority for properties to be purchased by the Government and leased to settlers to enlarge their holdings. Grants were made to assist these settlers in making grazing rather than wheatgrowing their major enterprise. Most of the properties were repurchased in the period 1940-47.

A swing towards barley-growing at the same time exerted a further depressing effect on the area sown to wheat. This trend continued until 1958-59 when the area sown to barley almost equalled the area sown to wheat. However, recently the wheat acreage has increased greatly, to more than double that of barley.

In the past twenty years a feature of the industry has been a steady improvement in average yields, due mainly to improved farming practices including the adoption of nitrogen-building clovers in the rotation. The average yield per acre for the ten seasons ended 1966-67 was 16.66 bushels, a record of 23.56 bushels being attained in 1960-61.

Wheatgrowing Districts

Wheatgrowing in South Australia is virtually restricted to the belt between the 8 inch and 18 inch rainfall isohyets for the period April-November inclusive. The principal wheat producing districts are Eyre Peninsula, the Central and Lower North regions and the Murray Mallee. These districts accounted for over 90 per cent of the area sown in 1966-67.

Wheat Sown for Grain: Area and Production, Statistical Divisions South Australia

Season	Statistical Division						Total
	Central	Lower North	Upper North	South Eastern	Western (a)	Murray Mallee	
AREA ('000 Acres)							
1957-58 ..	202	352	91	16	461	209	1,331
1958-59 ..	220	367	90	21	501	208	1,407
1959-60 ..	230	421	111	29	572	187	1,550
1960-61 ..	310	502	130	38	680	309	1,969
1961-62 ..	346	540	138	59	764	382	2,229
1962-63 ..	399	602	170	70	910	444	2,595
1963-64 ..	417	637	180	66	1,002	500	2,802
1964-65 ..	413	611	167	60	1,037	439	2,727
1965-66 ..	398	601	168	55	1,069	454	2,745
1966-67 ..	417	614	181	64	1,246	439	2,960
PRODUCTION ('000 Bushels)							
1957-58 ..	2,957	5,781	948	329	3,692	1,207	14,914
1958-59 ..	5,490	9,766	2,136	615	11,215	2,810	32,032
1959-60 ..	2,621	3,861	947	440	2,937	1,123	11,929
1960-61 ..	7,854	14,470	3,464	927	14,806	4,875	46,396
1961-62 ..	6,741	11,274	1,737	1,199	8,421	4,482	33,854
1962-63 ..	7,156	10,876	2,106	1,699	11,951	4,551	38,339
1963-64 ..	9,198	15,687	3,832	1,322	17,235	6,697	53,971
1964-65 ..	9,459	14,712	3,377	1,210	17,823	6,236	52,817
1965-66 ..	6,663	10,418	2,111	1,224	15,031	4,529	39,976
1966-67 ..	8,099	13,533	3,330	1,830	23,954	3,070	53,816

(a) Includes small plantings Outside of Counties.

Varieties of Wheat

The early wheatgrowers recognised the need to develop varieties of wheat suitable for South Australia's dry conditions and began by experimenting with varieties obtained from countries with a similar climate. One of these was the variety of Du Toit which was introduced from South Africa and because of its early maturity and moderate resistance to stem rust became very popular. This variety was destined to feature in the pedigree of many prominent wheat varieties of the future. Although stem rust, which can be a serious problem in

other States, is rarely troublesome in South Australia, breeders have still considered rust resistance as important as other objectives such as yield, baking quality and resistance to other diseases.

Of the varieties sown in the 1966-67 season Insignia, Heron, Gabo, Gamenya and Dirk were the five most important. Insignia, the leading variety, accounted for 34 per cent of the total area sown, its main attributes being that it is early maturing, has a short strong straw and is easily threshed at harvest without showing any tendency for the grain to crack. Next in order of importance were Heron (23 per cent) and Gabo (10 per cent), both having very similar features to Insignia. The similar climatic requirements of the three leading varieties reflect the suitability of this type of wheat for South Australia. The sharp cut-off of spring rains, the short growing season and strong winds have demanded their particular characteristics. The leading varieties of wheat sown for all purposes for the years 1964-65 to 1966-67 are shown in the following table.

Principal Varieties of Wheat Sown, South Australia

Variety	Area			Proportion of Total Area		
	1964-65	1965-66	1966-67	1964-65	1965-66	1966-67
	'000 Acres			Per Cent		
Dirk	246	208	176	8.9	7.4	5.8
Gabo	447	381	299	16.1	13.6	9.9
Gamenya	9	60	188	0.3	2.2	6.2
Heron	322	489	707	11.6	17.5	23.4
Insignia	1,104	1,045	1,037	39.8	37.4	34.4
Pinnacle	64	60	58	2.3	2.1	1.9
Raven	—	94	175	—	3.4	5.8
Sabre	262	222	171	9.5	7.9	5.7
Other	317	239	207	11.5	8.5	6.9
Total area ...	2,772	2,798	3,017	100.0	100.0	100.0

Research

Under the *Wheat Tax Act 1965* a tax of a quarter of a cent per bushel is levied on all wheat delivered to the Australian Wheat Board. The proceeds are then credited to the Wheat Research Trust Account for use by the respective State Wheat Industry Research Committees. Each committee allocates the amounts available for research and reports the expenditure approved to the Wheat Industry Research Council. The Commonwealth Government also makes contributions for wheat research, up to an amount equal to the wheat tax levied from the growers. The Wheat Industry Research Council recommends the avenue of research on which this grant should be spent.

Wheat research in South Australia is directed mainly at producing better wheat varieties and improving soil structure.

Roseworthy Agricultural College is engaged in a continuing wheat breeding programme designed to produce new varieties with improved yield, quality and disease resistance. To extend this programme and to assist with varietal recommendations the Department of Agriculture conducts wheat variety trials at various centres, and a wheat quality survey to define areas from which wheat of a certain minimum protein content can be expected.

Scientists at the Waite Agricultural Research Institute are studying organic matter and soil structure in relation to fertility in wheat soils and also the effects of high nitrogen levels on wheat varieties and the subsequent effect of increased growth on the use of soil moisture. Assistance in soil study is being

given by the Department of Agriculture, which is investigating the effects of fallowing on soil moisture, soil nitrogen, grain yields and grain protein. In addition fertiliser trials are being conducted with the object of improving basic knowledge of fertilisers for wheat.

Continuing trials are being conducted to ascertain suitable medics, clovers and lucernes for the wheatgrowing areas.

Marketing

Australian Wheat Board

The Board consists of a chairman, a finance member, a person engaged in commerce with experience of the wheat trade, a representative of flour mill owners, a representative of employees and ten representatives of wheatgrowers (two from each mainland State).

The Board has control over the receipt and disposal of all wheat and wheat products. It also controls the handling, storage and shipment of wheat. Under the stabilisation plan, the Board is the sole authority for marketing wheat within Australia and for marketing wheat and flour for export.

In its first full season, 1939-40, the Wheat Board received 195 million bushels. Over the past six seasons wheat receipts have increased markedly resulting in a record delivery in excess of 439 million bushels during 1966-67.

Deliveries to the Australian Wheat Board^(a)

Season	South Australia	Australia	Season	South Australia	Australia
	'000 Bushels			'000 Bushels	
1957-58	12,535	81,326	1962-63	35,121	285,722
1958-59	29,549	199,417	1963-64	51,660	307,837
1959-60	9,112	179,339	1964-65	49,991	346,511
1960-61	43,706	251,481	1965-66	36,160	234,394
1961-62	30,738	224,290	1966-67	50,007	439,212

(a) Mostly in bulk, but includes weight of bags where used.

During the year ended 30 November 1966 total exports of wheat (including wheat equivalent of flour and wheat products) were 167 million bushels. The value of the Wheat Board's sales on both the local and export market is shown below.

Australian Wheat Board Sales of Wheat and Wheat Flour

Crop Year	Sales		Value	
	Local	Export	Local	Export
	'000 Bushels		\$'000	
1956-57	62,620	56,897	85,437	80,937
1957-58	54,626	26,444	77,312	36,669
1958-59	53,654	144,722	77,796	190,939
1959-60	59,338	118,674	87,986	156,989
1960-61	54,920	195,582	83,255	261,906
1961-62	52,371	171,412	82,486	244,990
1962-63	51,180	233,806	81,042	317,292
1963-64	56,613	250,281	82,282	357,660
1964-65	74,730	270,835	108,924	362,337
1965-66	66,869	166,917	101,480	240,654

Bulk Handling

The South Australian Co-operative Bulk Handling Ltd which was incorporated on 7 December 1954 is the sole bulk grain handling authority in this State and is owned, financed and controlled by the growers. At 31 December 1967 the Co-operative had a storage capacity of 55.1 million bushels (of which 43.7 million bushels was available for wheat) with construction planned or under way for additional storage capacity of between 4 and 5 million bushels.

South Australia was the last of the major cereal-growing States to adopt bulk handling methods. However, the success of the first bulk installation at Ardrossan of one million bushels capacity, which began operating in 1952, paved the way for rapid development. The Co-operative purchased the Ardrossan silo from the Australian Wheat Board after a Bill had been passed on 7 July 1955 giving the Co-operative the exclusive right to handle bulk grain in South Australia.

Finance for the construction of storages came initially from a bank advance, and in addition growers who were members of the Co-operative were required to pay a toll of 1.7 cents for each bushel delivered to the silo in the first year. Thereafter the toll for members and non-members was 5 cents per bushel and 3.4 cents per bushel respectively. After twelve years of membership, members are gradually refunded all tolls paid. From time to time further bank advances have been obtained to accelerate the building programme to meet the increased demand for storage space.

The bulk handling operations of the State have been divided into six divisions—Ardrossan, Wallaroo, Thevenard, Port Lincoln, Port Pirie and Port Adelaide—each of which provides a terminal port as a shipping outlet for the country silos within the division. The bulk capacity of the respective divisions for each of the three major cereals is shown in the following table.

**Bulk Handling Capacity, South Australia
31 December 1967**

Division	Wheat	Barley	Oats
		'000 Bushels	
Port Adelaide	11,820	3,650	600
Ardrossan	3,310	2,000	—
Wallaroo	7,015	1,410	—
Port Pirie	6,802	360	—
Port Lincoln	10,435	2,515	150
Thevenard	4,315	240	510
Total	43,697	10,175	1,260

During the 1966-67 season the Co-operative received over 49 million bushels of bulk wheat representing 98 per cent of total State deliveries.

A certificate showing particulars of the wheat received from a grower is forwarded by the bulk handling authority to the Australian Wheat Board, which then makes payment to the grower.

Under the system of pooling wheat, fees for the handling of wheat by the Co-operative are paid by the Wheat Board.

Grading of Wheat

The grading of wheat for export is based on a fair average quality standard (f.a.q.). A separate standard is determined for each of the four main wheat

producing States by a committee of representatives of the Wheat Board, bulk handling authorities, State Departments of Agriculture, farmers, millers and shippers. Samples of wheat from the several wheatgrowing districts are mixed in the proportion grown in the districts and the f.a.q. weight is determined from the sample. These weights are used as a guide in determining standards of wheat delivered to the Wheat Board.

Since 1957-58 in South Australia, two standards have been fixed in each season excepting the 1960-61 and 1966-67 seasons when three were fixed. Currently the two standards are known as F.A.Q. and Hard (called Semi-hard prior to December 1966), the latter being used for wheat of a better quality meeting two main requirements—that the type of wheat is one of a number of specified hard varieties and secondly, that it is of a uniform vitreous appearance of which not more than 10 per cent is mottled or bleached. Because of hard wheat's better baking qualities, resulting in a keener overseas demand, growers of this grade receive a premium of up to 5 cents per bushel. Growers delivering inferior wheat (grain containing excessive foreign matter) or lightweight wheat receive reduced payments per bushel.

This method of setting f.a.q. standards for export marketing is peculiar to Australia, as other countries sell to fixed grades or according to sample. The standards adopted in each of the ten seasons 1957-58 to 1966-67 are shown in the next table.

F.A.Q. Standards of Wheat, South Australia

(Weight in lb of a bushel of wheat)

Season	F.A.Q.	Hard	Season	F.A.Q.	Hard
1957-58	65½	66	1962-63	62½	63½
1958-59	63½	63½	1963-64	64½	64½
1959-60	63½	63	1964-65	62½	63
1960-61 (a)	64½	64	1965-66	63	62½
1961-62	63½	63	1966-67 (b)	62	64

(a) A third standard of Soft—64½ lb—was fixed in 1960-61.

(b) A third standard of No. 1 off-grade—57½ lb—was fixed in 1966-67.

Wheat Stabilisation Plan

Wheat grown in Australia is marketed under a government stabilisation scheme which provides for the fixing of a home consumption price for each season, the pooling of the proceeds of local and overseas sales, the guarantee of a minimum price equal to the estimated cost of production and the operation of a stabilisation fund into which are paid the proceeds of a tax on exports.

The first post-war Wheat Stabilisation Plan operated between 1948 and 1953. Subsequent stabilisation plans were introduced in 1954 (for seasons 1953-54 to 1957-58), 1958 (for seasons 1958-59 to 1962-63) and 1963 (for seasons 1963-64 to 1967-68).

Under the present plan the Commonwealth Government guaranteed to growers a return of \$1.44 per bushel in the first year of the plan, on up to 150 million bushels of wheat exported from the crop. The guaranteed return is based on production cost provided by an economic survey of the wheat industry carried out by the Bureau of Agricultural Economics and can be varied in each season of the plan in accordance with movements in an index of the cost of production. In arriving at the home consumption price a small amount is added to the guaranteed price to cover the cost of transporting wheat from the mainland States to Tasmania. For the season 1966-67 the home consumption price was \$1.57.

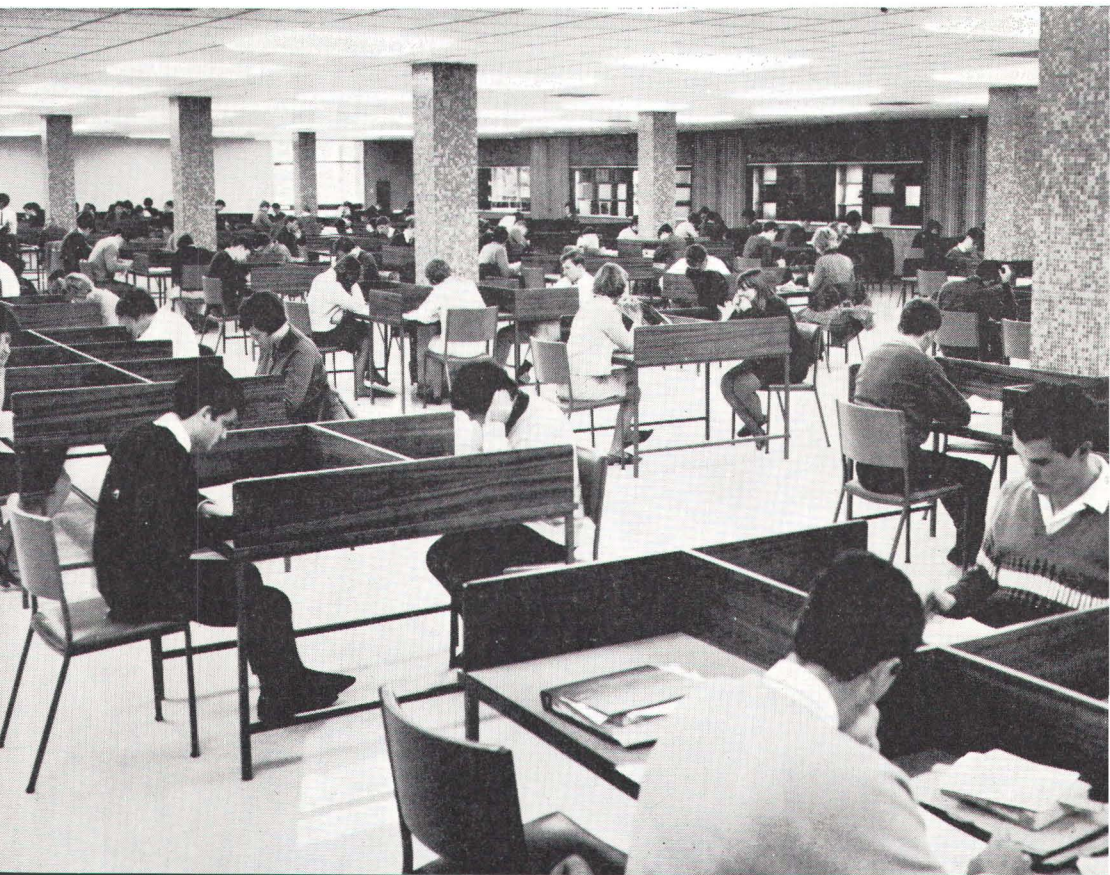


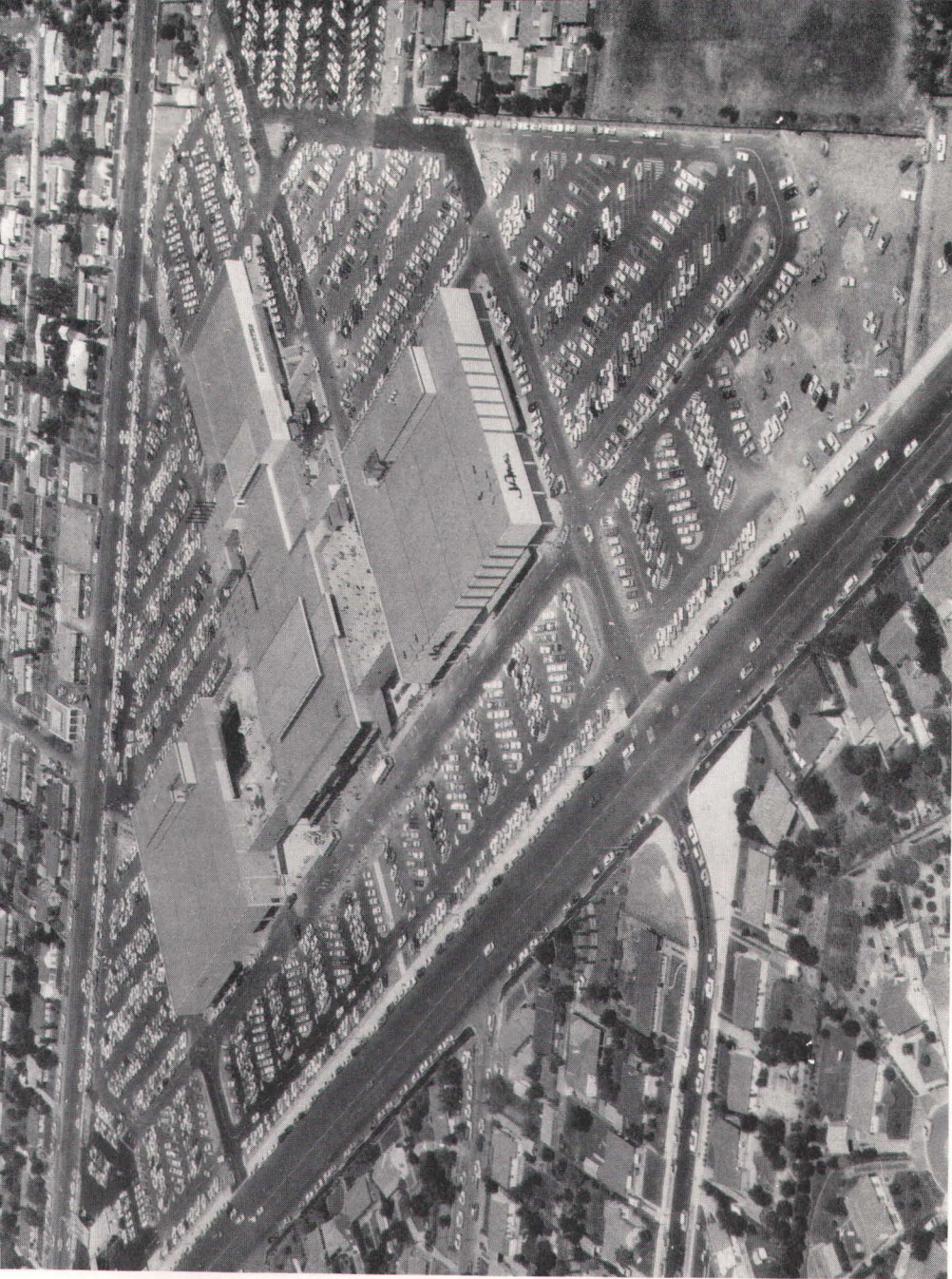
J. P. Conquest

Hairy nosed wombat (*Lasiorhinus latifrons*)—apart from a small colony in Queensland this species is now found only in South Australia.

The Reference Library reading area in the new State Library.

Libraries Board of South Australia





Marion Shopping Centre—
located eight miles from the
city has a retail floor area of
429,000 sq ft and parking
space for 2,200 motor vehicles.

Exported wheat is subject to a tax which is equivalent to the excess of returns from export sales over the guaranteed return. The export tax, which is paid into the stabilisation fund, is restricted to a maximum rate of 15 cents per bushel. In addition the balance in the stabilisation fund may not exceed \$60 million, any surplus being returned to the growers.

The stabilisation fund is used to make up deficiencies in respect to 150 million bushels from each crop where the average export realisation falls below the guaranteed return. In the event of the fund being unable to meet the deficiency the Commonwealth Government is required to meet its obligations under the guarantee.

International Grains Agreements

The fifth International Wheat Agreement came into effect on 1 August 1962 for a period of three years, but was extended until 31 July 1967. Under this agreement the participating importing countries undertook to buy each year from the exporting countries a stated percentage of their total commercial import requirements. Previously, participating exporting countries competed to supply at prices within a prescribed range but under a provision of this agreement it was not necessary for a maximum price declaration to be made.

In July 1967, the Kennedy Round series of negotiations conducted under the General Agreement on Tariffs and Trade resulted in an agreement among an important group of countries interested in the trade in cereals to negotiate a global grains arrangement to supersede the existing International Wheat Agreement. The terms of agreement reached were set out in a Memorandum of Agreement which, among other things, incorporated a new minimum price for wheat and a plan for international food aid.

The settlement on cereals according to the Memorandum of Agreement was translated into a formal agreement (the International Grains Arrangement 1967) at a conference in Rome in July/August 1967, at which fifty-three countries including Australia were represented. Some members of the 1962 International Wheat Agreement including the U.S.S.R. did not participate in the Conference.

The International Grains Arrangement, 1967 embraces a Wheat Trade Convention and a Food Aid Convention and is to come into force on 1 July 1968 for a period of three years.

The objectives of the Wheat Trade Convention are:

- to assure supplies of wheat and wheat flour to importing countries and markets for wheat and wheat flour to exporting countries at equitable and stable prices;
- to promote the expansion of the international trade in wheat and wheat flour and to secure the freest possible flow of the trade in the interests both of exporting and importing countries, and thus contribute to the development of countries, the economies of which depend on commercial sales of wheat; and
- in general to further international co-operation in connection with world wheat problems recognising the relationship of the trade in wheat to the economic stability of markets for other agricultural products.

Each member country importing wheat undertakes that the maximum possible share and not less than a specific percentage of its total commercial purchases of wheat shall be purchased from member countries. Exporting countries under-

take that wheat from their countries shall be made available for purchase by importing countries in quantities sufficient to satisfy commercial requirements at prices consistent with the price ranges established.

The Arrangement covers new ground in its pricing provisions; whereas the 1962 International Wheat Agreement specified a maximum and minimum price for one wheat, the new Arrangement specifies maximum and minimum prices for thirteen wheats.

The base wheat role has been transferred from Canadian Manitoba No. 1, a wheat of limited trade, to the United States No. 2 Hard Red Winter ordinary protein, a wheat which is traded in substantial volume. By transferring the base to a U.S. wheat, the geographical basing point for freight calculations has become the U.S. loading ports in the Gulf of Mexico. The minimum price for the new base wheat, U.S. No. 2 Hard Red Winter ordinary protein has been fixed at \$U.S.1.73 a bushel f.o.b. Gulf ports. After allowing for quality differences and for the change in geographical basing points from the Great Lakes to the Gulf, the new minimum price has been calculated to be about 19 U.S. cents above the minimum in the 1962 Wheat Agreement.

The maximum and minimum prices, based on f.o.b. Gulf ports are given in the following statement.

	Min. price (U.S. dollars per bushel)	Max. price
Canada		
Manitoba No. 1	1.95½	2.35½
Manitoba No. 3	1.90	2.30
United States		
Dark Northern Spring No. 1 14 per cent	1.83	2.23
Hard Red Winter No. 2 (ordinary)	1.73	2.13
Western White No. 1	1.68	2.08
Soft Red Winter No. 1	1.60	2.00
Argentina		
Plate	1.73	2.13
Australia		
F.A.Q.	1.68	2.08
European Economic Community		
Standard	1.50	1.90
Sweden	1.50	1.90
Greece	1.50	1.90
Spain		
Fine Wheat	1.60	2.00
Common Wheat	1.50	1.90

The minimum price for Australian wheat f.o.b. Australian ports is \$U.S.1.68 a bushel plus freight from Gulf ports to United Kingdom less freight from United Kingdom to Australia. A Prices Review Committee will determine the prices for ports other than the traditional ports mentioned and for wheats other than those specified. The committee will also carry out a continuous review of prices and will act to maintain market stability.

The Arrangement includes provisions enabling countries who consider their wheat/flour interests have been affected in wheat/flour price relationships to request consultations with the member countries concerned. Member countries

undertake to conduct any concessional transactions in grains in such a way as to avoid harmful interference with normal patterns of production and international commercial trade. Concessional transactions are to be additional to the normal commercial transactions which could be expected.

The Food Aid Convention of the Arrangement provides for a programme of food aid amounting to 4.5 million metric tons of grain for human consumption in each of the three years of the Arrangement. The Convention commits the original signatories to the Memorandum of Agreement on cereals negotiated during the Kennedy Round to a contribution to the total programme in agreed proportions.

The principal contributions are: Per cent

U.S.A.	42
E.E.C.	23
Canada	11
U.K.	5
Japan	5
Australia	5

Australia's commitment is 225,000 metric tons. Other nations may join the convention and contributions may be made in grain or cash.

This is the first time such a provision has been included in an international agreement on wheat and represents an acknowledgment of the responsibility of all affluent countries to aid developing countries.

Prices

The table below shows the trend in export and domestic prices of Australian wheat for the years 1957-58 to 1966-67.

Export and Domestic Prices of Australian Wheat

Year	Export Price per Bushel (a)	Home Price per Bushel
	\$	\$
1957-58	1.45	1.43
1958-59	1.38	1.47
1959-60	1.33	1.50
1960-61	1.35	1.53
1961-62	1.44	1.58
1962-63	1.44	1.59
1963-64	1.53	1.46
1964-65	1.43	1.47
1965-66	1.43	1.53
1966-67	1.54	1.57

(a) Average of the twelve monthly prices, year ended July.

The export prices shown in the table are the basic selling prices for f.a.q. bulk wheat, f.o.b. The home prices are those set by the Wheat Board for bulk wheat (f.o.r.) sold to millers for gristing into flour for consumption in Australia. The prices charged by the Board for wheat for stock feed in Australia are the same

as those charged for wheat for human consumption. Before 1953-54 differential rates were charged in some years.

BARLEY

Production

South Australia is by far the most important barley producing State and in 1965-66 the acreage sown represented more than 45 per cent of the Australian total and yielded 44 per cent of the grain produced. Of the area sown in South Australia, 89.4 per cent was two-row barley for grain, reflecting the suitability of certain areas of the State for the production of high quality malting barley. For malting purposes a plump mellow grain with fine skin coverings can only be obtained when the ripening period is somewhat prolonged by cool conditions, without much high temperature or drying winds.

Although formerly a crop of comparatively minor importance, barley growing increased greatly after the 1939-45 War to the extent that a few years ago it seriously rivalled wheat as the major grain crop. For the three consecutive harvests, 1956-57 to 1958-59, there were more bushels of barley than bushels of wheat produced, but actual weight was less since a bushel of barley weighs only 50 lb compared with 60 lb for a bushel of wheat.

Area and Production of Barley for Grain, Statistical Divisions, South Australia

Season	Statistical Division						Total
	Central	Lower North	Upper North	South Eastern	Western (a)	Murray Mallee	
AREA ('000 Acres)							
1957-58 ..	376	252	24	23	252	285	1,212
1958-59 ..	412	268	28	28	282	314	1,332
1959-60 ..	410	250	25	38	262	305	1,290
1960-61 ..	466	292	32	51	322	393	1,556
1961-62 ..	407	221	17	37	266	323	1,271
1962-63 ..	357	171	14	25	213	273	1,053
1963-64 ..	368	186	13	26	222	308	1,123
1964-65 ..	364	173	11	27	210	310	1,095
1965-66 ..	365	173	11	24	205	320	1,098
1966-67 ..	363	177	10	24	194	338	1,107
PRODUCTION ('000 Bushels)							
1957-58 ..	7,146	3,698	219	579	3,006	2,904	17,552
1958-59 ..	12,929	8,685	843	761	7,634	6,813	37,665
1959-60 ..	4,575	1,849	186	512	2,168	2,567	11,857
1960-61 ..	14,216	9,621	859	881	8,542	8,114	42,233
1961-62 ..	7,177	4,154	206	668	3,916	5,172	21,293
1962-63 ..	6,682	2,827	153	708	3,600	4,035	18,005
1963-64 ..	9,698	4,984	266	493	4,333	4,562	24,336
1964-65 ..	11,326	4,647	229	623	4,562	5,545	26,932
1965-66 ..	7,081	2,847	106	501	3,838	4,141	18,514
1966-67 ..	10,012	4,245	176	636	4,785	3,843	23,698

(a) Includes small plantings Outside of Counties.

Unlike wheat, barley growing has nearly always been confined to very suitable districts resulting in high and remarkably stable yields. During the period 1901-02 to 1935-36 the highest yield was 20.00 bushels per acre and excepting for the severe drought of 1914-15 the lowest was 13.67 bushels per acre. The subsequent increase in barley growing in districts subject to greater climatic variations, e.g. Murray Mallee and Eyre Peninsula, has been responsible for

greater average yield fluctuations since 1936-37 but at the same time the average yield has increased, the record yield being 28.27 bushels per acre in 1958-59.

Yorke Peninsula, reputed to be the best barley growing area in Australia, has been the major producing district in South Australia since the 1914-18 War. In the 1966-67 season this area contributed just over 40 per cent of the total crop. It has an ideal climate for barley growing as the moisture-laden breezes off the gulfs on either side retard ripening.

More recently, barley growing has become prominent on the red mallee soils of the moister coastal regions of Eyre Peninsula and the lighter soils of the southern Murray Mallee region.

Varieties

The most widely grown barley variety is Prior, which for the three seasons ended 1966-67 averaged nearly two-thirds of the total area sown. This variety, thought to be developed from English Archer malting barley, was first grown by Mr S. Prior of Brighton, South Australia. Prior is capable of producing grain of very high malting quality under favourable conditions but it suffers from two major deficiencies—it is susceptible to neck break and shattering if strong winds are experienced when the crop is nearly ripe and it is not well adapted to conditions of high soil fertility.

A variety, known as Noyep, is similar to Prior but is earlier maturing and is suitable to areas where a sudden cut-off in spring rainfall is experienced. These characteristics have resulted in a significant switch to this variety from one per cent in 1961-62 to 23 per cent of total area sown in 1966-67.

Other varieties of less importance are Maltworthy, which is more resistant to wind damage than Prior but of inferior commercial malting quality and Research, much later maturing than Prior, which is recommended only for the lower South East.

Research

Because of the inherent similarities, the barley industry has in many instances benefited from the technological advances achieved by the wheat industry, *viz* the use of superphosphate and the inclusion of pastures in rotation, but certain problems peculiar to barley have necessitated the undertaking of extensive research.

The deficiencies of the major variety Prior have been the subject of intensive investigation and research work by the Department of Agriculture. To overcome weaknesses in the straw of Prior which is responsible for the heavy loss of grain when crops are almost ripe, two methods known as windrowing and rolling have been devised. The aim of both methods is to lay the crop down out of the wind at a time when grain formation is completed, but before the straw is dry enough to be brittle.

Another problem causing concern is the unfavourable effect increased soil fertility is having on quality. This has been most noticeable on Yorke Peninsula where the increased use of clover pastures and heavier dressings of superphosphate have greatly increased soil fertility. Excess nitrogen induces rank growth which is detrimental to grain quality.

In experiments at Turretfield and Urania the effects of various fertility levels on different barley varieties are being observed to discover if any variety can approach the ideal of combining high yield with high quality on clover soils.

Marketing

The marketing of barley is under the control of the Australian Barley Board which operates in South Australia and Victoria and provides an orderly marketing system for barley grown in these States.

In the first season of South Australian and Victorian joint marketing in 1942-43 the Board received 3,810,000 bushels. Since then, barley receivals have increased considerably and in the 1960-61 season the Board received a record total of 44,624,000 bushels.

Australian Barley Board Receivals, South Australia^(a)

Season	Two-Row			Six-Row		Total
	Malting	Milling	Feed	Malting	Feed	
	'000 Bushels					
1958-59	6,867	17,033	10,081	82	960	35,023
1959-60	2,563	1,940	3,233	1	59	7,796
1960-61	8,966	15,278	12,880	79	1,177	38,380
1961-62	996	4,162	11,860	4	204	17,226
1962-63	4,210	6,318	3,328	3	88	13,947
1963-64	5,621	8,036	6,343	12	348	20,360
1964-65	6,947	10,211	5,166	30	269	22,623
1965-66	1,151	2,923	9,115	8	100	13,297

(a) Includes weight of bags but some bulk handling since 1963-64.

The Board has been able to dispose of each season's receivals with little difficulty. Major export markets are Europe, Japan and the United Kingdom.

Following recommendations submitted in a report by an investigating committee in October 1963 a bulk handling scheme for barley has been introduced. In 1963-64, the first year of its operation, bulk barley was received direct from growers at terminal ports in South Australia, a total of 1,172,113 bushels being handled and 5,578,927 bushels were handled in 1965-66. In 1964-65 bulk barley was received for the first time at other than terminal silos. Storage capacity at 30 June 1967 had increased to 10 million bushels.

For marketing purposes all barley is classified on sample before delivery. Classification is firstly by row variety and secondly by quality—Malting (No. 1 and No. 2), Milling (No. 3) and Feed (No. 4 and No. 5) for two-row and Malting and Feed (No. 4 and No. 5) for six-row.

The prices paid to growers in the 1965-66 season ranged from \$1.287 per bushel for two-row bagged barley of Malting No. 1 quality to \$0.912 per bushel for six-row bagged barley of No. 5 (feed) quality. Growers who delivered barley in bulk received 8.80 cents less per bushel.

The payments to the growers are made in a series of four advances, the first of 85 cents per bushel for first quality barley being made on delivery.

In 1957 agreement between brewers, maltsters and the Board was reached on a formula for fixing the price of malting barley. Prices of barley for distilling and pearling purposes are determined after the malting price has been fixed and prices for feed are determined monthly.

The home consumption prices determined by the Board for barley for season 1965-66 and preceding years are shown below.

Price per Bushel of Barley for Home Consumption

Season	Malting No. 1 per Bush.	Distilling and Pearling No. 3 Grade per Bush.	Feed No. 4 Grade per Bush.	Feed No. 5 Grade per Bush.
			\$	
1958-59—Bagged	1.33	1.26	0.95	0.90
1959-60—Bagged	1.32	1.24	1.10	1.05
1960-61—Bagged	1.36	1.28	1.00	0.95
1961-62—Bagged	1.39	1.32	1.00	0.95
1962-63—Bagged	1.41	1.33	1.10	1.05
1963-64—Bagged	1.35	1.28	1.10	1.05
1964-65—Bagged	1.37	1.29	1.10	1.05
Bulk	1.28	1.21	1.03	—
1965-66—Bagged	1.44	1.36	1.18	1.13
Bulk	1.34	1.26	1.10	1.05

OATS

The following table shows the area of oats sown for grain, for hay and for forage and the production of grain and hay in recent years.

Oats, South Australia

Season	Area Sown for			Total Area	Production	
	Grain	Hay	Forage		Grain	Hay
	'000 Acres				'000 Bushels	'000 Tons
1959-60	505	118	190	813	2,504	75
1960-61	512	153	242	907	11,478	243
1961-62	323	83	224	630	4,391	102
1962-63	416	116	307	839	5,770	147
1963-64	500	141	315	956	9,149	185
1964-65	444	110	397	951	8,977	157
1965-66	455	112	404	971	5,622	118
1966-67	509	135	314	958	10,276	183

The milling qualities of most oats grown in South Australia do not meet the requirements of overseas markets and only a small proportion of the harvest is exported; most of the crop is used as animal fodder. As is the case with barley, some of the area sown for grain and hay is grazed until June or July then closed to sheep to allow re-growth to a crop. Part of the area sown for forage is left to stand until it is used as dry grazing in autumn, when other fodder is not plentiful. In 1966-67, 86 per cent of the total area of oats was sown in three varieties—Avon 477,000 acres, Kent 175,000 acres and Kherson 168,000 acres.

RYE

Rye is one of the minor crops, but there has been development of its use to control sand drift and to help stabilise the light soils of the Murray Mallee in recent years. The sands are deficient in two main nutrients (nitrogen and phosphorus) and rye is sown, with a mixed superphosphate-ammonia fertiliser, early in the season. Its rapid early growth while the ground is still warm and before the strong winds of winter cause sandblast is at present the most effective form of control of drifting sand.

Rye provides early greenfeed and its use as such and the production of a few bushels of grain per acre on some farms are valuable adjuncts to the use for soil stabilisation. Although most grain is used for stock feed, varying quantities are exported in different years for milling. Rye hay is poor quality material and only a few hundred tons are produced each year.

In 1966-67, 57,000 acres of rye for grain yielded 244,000 bushels. Record production was 446,000 bushels from 57,000 acres in 1958-59.

HAY

The quantity of hay produced varies considerably from year to year according to seasonal conditions and the need to replace stocks used during the previous season. The main crops cut for hay in recent years have been oats, clover and meadow hay which together account for considerably more than half of all hay produced. The quantity of lucerne hay produced has increased from a few thousand tons twenty years ago to 122,000 tons in 1966-67.

Hay: Area and Production, South Australia

Season	Oaten	Wheaten	Lucerne	Barley and Rye	Clover and Grass	Total
AREA ('000 Acres)						
1959-60	118	52	21	18	36	245
1960-61	153	52	36	15	137	393
1961-62	83	34	24	9	59	209
1962-63	116	44	30	15	82	287
1963-64	141	41	38	15	123	358
1964-65	110	40	43	11	110	314
1965-66	112	46	38	15	88	299
1966-67	135	48	67	19	213	482
PRODUCTION ('000 Tons)						
1959-60	75	43	34	12	42	206
1960-61	243	88	62	22	201	616
1961-62	102	46	44	9	85	286
1962-63	147	55	55	16	134	407
1963-64	185	57	65	18	163	488
1964-65	157	60	81	13	176	487
1965-66	118	54	66	14	116	368
1966-67	183	65	122	21	339	729

Between 50,000 and 100,000 tons of silage are produced each year and in certain areas this is an important supplementary stock food.

VEGETABLES

The market garden industry in South Australia is characterised by a large number of growers, most of whom cultivate a relatively small garden. Many of the gardens form part of a larger enterprise. A large part of the production of the industry comes from properties within easy reach of the Adelaide market.

Of the total area of 17,000 acres devoted to market gardens, districts adjacent to Adelaide account for 11,000 acres producing all types of vegetables, including large quantities of celery and early tomatoes for export. An area of some 2,000 acres in Upper North Division (mainly on the coastal plains near Port Pirie) is devoted to the production of peas, early tomatoes and pumpkins for Adelaide and for export to the Melbourne market. Nearly 3,000 acres along the River Murray are devoted to production of peas, pumpkins and melons

for the Adelaide market, tomatoes for local markets and small areas of most other vegetables.

The following table shows the area and production of the principal vegetables for human consumption in South Australia in 1965-66 and 1966-67.

Vegetables for Human Consumption, South Australia

Vegetable	Area		Unit of Quantity	Production	
	1965-66	1966-67		1965-66	1966-67
	Acres				
Beans	219	239	bushel	52,010	49,068
Cabbages	365	405	dozen	164,405	197,104
Carrots	331	368	ton	4,453	5,224
Cauliflowers	549	633	dozen	211,396	276,474
Celery	289	267	crate	203,772	204,905
Lettuce	459	498	case	239,086	284,997
Melons	385	423	ton	2,096	2,441
Onions	1,148	1,631	ton	10,069	17,933
Peas	4,075	4,035	bushel	245,024	327,088
Potatoes	5,748	5,948	ton	56,471	60,271
Pumpkins	1,126	764	ton	6,425	4,946
Tomatoes	1,083	1,408	half-case	1,474,238	1,988,844
Turnips	240	222	ton	2,018	1,730
Other	549	586	..	..	..
Total	16,564	17,426	..	..	..

The bulk of the potato production comes from the central and southern Adelaide hills and from the Mount Gambier area. The average yield has risen progressively from 5.5 tons per acre in 1947-48 to slightly more than 10 tons per acre in 1966-67. This improvement is largely due to better quality seed, improved fertilisers and advances in pest and disease control.

The South Australian Potato Board was constituted under authority of the Potato Marketing Act, 1948, to control the sale and delivery of potatoes by growers. It fixes the maximum and minimum prices and the conditions under which potatoes may be sold. Members of the Board are representatives of retail sellers, merchants and growers of potatoes.

Most green peas are grown in the Port Pirie-Mambray Creek area, in the hills to the south of Adelaide, and in the Upper Murray irrigation areas. The crop from the Port Pirie area has a ready market in Melbourne, the supplies being refrigerated and sent by express rail to prevent deterioration of quality.

Celery produced in South Australia meets a steady demand from interstate markets and production has been about 200,000 crates annually for the past few years. Nearly all of the celery is grown on the Adelaide plains adjacent to the city.

The Adelaide plains produce most of the South Australian tomatoes, which are nearly all grown in glass houses. Significant quantities, mostly for canning and juice production in local factories, are now grown in the Upper Murray irrigation areas. In recent years higher yields have resulted from the introduction of better varieties.

FRUIT

Orchard Fruit

A large variety of fruit crops is grown in South Australia. The main types of fruit are oranges, peaches and apricots (predominantly grown in the irrigation

settlements of the Upper Murray) and apples (nearly all grown in the Adelaide Hills). The following table relating to 1966-67 production shows the concentration of fruitgrowing in Central and Murray Mallee Divisions.

**Production of Principal Fruit Crops, Statistical Divisions, South Australia
1966-67**

Fruit	Statistical Division			Other Areas	State
	Central	Lower North	Murray Mallee		
Citrus fruit:	'000 Bushels				
Oranges;					
Navel	121.8	1.4	1,174.1	0.4	1,297.6
Other.....	79.3	0.8	1,656.4	0.1	1,736.6
Other citrus fruit	29.0	0.9	243.1	0.3	273.2
Non-citrus fruit:					
Apples.....	1,523.8	4.4	14.1	1.7	1,544.1
Apricots	215.7	4.5	1,079.9	7.3	1,307.3
Peaches	79.1	2.	1,341.3	3.2	1,426.6
Pears	263.5	1.6	264.7	0.3	530.1
Plums and Prunes	80.7	11.9	11.3	0.7	104.6

Citrus growing is concentrated in the irrigation settlements of the Upper Murray where 90 per cent of the total crop is produced. The industry has shown its greatest expansion in the last decade; production first reached 1,500,000 bushels in 1955-56 and 2,500,000 bushels in 1962-63 while by 1964-65 a record level of over 3,400,000 bushels was achieved. This increase was due largely to the extensive orange tree plantings in newly-developed irrigation schemes, including those of Sunlands and Golden Heights near Waikerie. Another factor has been a considerable change from furrow to overhead sprinkler irrigation for citrus trees planted since 1950. This change, coupled with advances in irrigation timing techniques, has raised the potential yield of recent plantings. However, high salinity in irrigated water over the last year has led to the introduction of some under-tree sprinklers. Over 20 per cent of the State's orange production is exported, this being about 60 per cent of total orange exports from Australia.

The following table of citrus trees of bearing age and production during the past five seasons shows the predominance of navel and valencia oranges in the State's citrus industry. Other types of oranges, lemons and limes, mandarins, grapefruit, etc., together represent only about 10 per cent of total citrus production.

Citrus Fruits: Trees and Production, South Australia

Season	Oranges			Lemons and Limes	Mandarins	Grapefruit and Other Citrus	Total Citrus
	Navel	Valencia	Other				
TREES OF BEARING AGE ('000)							
1962-63	330	338	12	19	16	28	743
1963-64	332	356	12	19	17	29	765
1964-65	348	387	10	19	21	28	813
1965-66	361	407	10	21	26	29	854
1966-67	397	451	10	23	27	30	937
PRODUCTION ('000 Bushels)							
1962-63	1,269	1,201	38	48	57	163	2,776
1963-64	1,032	1,018	34	36	41	159	2,320
1964-65	1,428	1,726	34	42	62	145	3,437
1965-66	1,344	1,252	37	43	49	186	2,911
1966-67	1,298	1,706	31	55	70	148	3,307

Apple growing is the principal non-citrus fruit industry. Although the area of apple orchards has decreased by some 50 per cent over the last forty years, production has gradually increased, partly because of the removal of lower yielding orchards and partly due to the general adoption of supplementary irrigation and lighter pruning practices. The yield per bearing acre, which averaged 197 bushels for the ten seasons ended 1961-62, rose to 337 bushels in 1964-65, the season of record production. About 20 to 25 per cent of the crop is exported each year either as fresh, pulped or preserved apples.

Pears are grown in the Adelaide Hills, in the Barossa Valley and on the Murray irrigation settlements. The yield from the 1964-65 harvest was a record 574,000 bushels from 1,664 acres. Pear acreage reached a peak in 1922, then declined gradually until 1952. An expansion of the canned fruit industry has caused a subsequent increase in plantings along the River Murray.

The stone fruits industry is becoming more important following development in the irrigation schemes. Production of peaches has shown the greatest increase: the 1951-52 yield of 157,000 bushels from 2,064 acres was fairly typical for the crop until that time, but by 1966-67 the yield was a record 1,427,000 bushels from 4,754 acres. In the same period production of apricots has risen from 507,000 to 1,307,000 bushels in 1966-67. South Australia is the major apricot-producing State, with the greater part of the crop being dried and much of the remainder being canned.

Cherries, plums and prunes and almonds are the most important of the remaining crops.

Non-Citrus Orchard Fruit: Trees and Production, South Australia

Season	Apples	Apricots	Cherries	Peaches	Pears	Plums and Prunes
TREES OF BEARING AGE ('000)						
1962-63	559	357	51	366	169	99
1963-64	544	361	49	367	172	95
1964-65	550	366	49	385	174	92
1965-66	536	365	50	395	173	85
1966-67	529	382	50	397	166	78
PRODUCTION ('000 Bushels)						
1962-63	1,496	868	35	841	412	102
1963-64	1,341	929	54	979	524	91
1964-65	1,625	1,170	42	1,173	574	92
1965-66	1,308	827	54	1,303	509	85
1966-67	1,544	1,307	41	1,427	530	105

South Australia accounts for almost the entire Australian production of dried apricots, peaches, pears, nectarines and figs—mostly in the Upper Murray areas and the Barossa Valley. A relatively small quantity of dried prunes is produced in the Barossa Valley and in the Noarlunga district.

Production in 1966-67 included 66,894 cwt of dried apricots, 12,983 cwt of dried peaches and 4,333 cwt of dried pears.

The Dried Fruits Board, constituted under the Dried Fruits Act, 1934-1941, regulates marketing in South Australia by determining a quota for home sale of dried fruits in each year. By advertising or other means, the Board may encourage the consumption of dried fruits.

Grapes

Approximately 42 per cent of Australia's vineyard area is located in South Australia where the bulk of the grapes grown are used for winemaking. In 1966-67 South Australia produced 29.3 million gallons of wine and 17,300 tons of dried vine fruit representing 70 per cent and 16 per cent respectively of total Australian production. The following table shows the area, production and utilisation of grapes for the seasons 1957-58 to 1966-67.

Area, Production and Utilisation of Grapes, South Australia

Season	Area of Vines	Total Grape Production (Fresh)	Wine Production (a)	Dried Fruit Production		
				Currants	Sultanas	Raisins
	Acres	Tons	'000 Gallons		Cwt	
1957-58	57,439	199,032	26,400	96,480	195,820	30,300
1958-59	56,749	194,351	25,132	90,620	221,400	25,060
1959-60	56,853	157,275	21,576	56,880	128,680	55,160
1960-61	56,897	178,290	25,061	90,860	115,900	19,120
1961-62	57,836	220,002	30,831	54,840	189,020	24,460
1962-63	58,266	164,808	20,785	52,140	187,420	32,720
1963-64	58,679	211,719	27,102	90,660	244,820	18,360
1964-65	58,857	234,297	28,022	100,875	264,054	62,440
1965-66	58,730	183,802	23,884	63,063	193,794	44,498
1966-67	57,080	225,416	29,324	75,452	248,288	22,597

(a) Excludes grape spirit added.

Grapes are grown commercially in South Australia in non-irrigated areas of 19 to 26-inch rainfall, and in much drier areas (frequently with less than a 10-inch rainfall) where irrigation is available. The expansion of grape growing in the foothills and plains near Adelaide was most pronounced between 1845 and 1860. Some vineyards still remain in the suburbs, but they are gradually disappearing. Main plantings are of wine grapes but some table grapes are also grown. A more detailed reference to grape growing in South Australia is included on pages 376-95.

In 1888 the Chaffey brothers founded the irrigation settlements of Mildura (Victoria) and Renmark. After the 1914-18 War returned soldiers were settled on these irrigated areas and this provided the South Australian vine industry with one of its most significant periods of expansion; the area under vines in the State rose from 31,000 acres in 1918-19 to over 50,000 acres in 1924-25. These settlements now are by far the most important grape growing areas in the State and in 1966-67 accounted for 41 per cent of the area under vines and 68 per cent of grapes produced.

The following table gives particulars of area of vines and production of grapes in the main statistical divisions in 1966-67.

Area and Production of Vines, Statistical Divisions, South Australia 1966-67

Statistical Division	Area			Production of Fresh Grapes			
	Wine	Table	Drying	Wine	Table	Drying	Total
	Acres			Tons			
Central	26,993	28	611	49,854	38	1,257	51,149
Lower North ..	2,734	2	282	4,855	3	562	5,420
South Eastern ..	649	—	—	1,102	—	—	1,102
Murray Mallee.	15,005	189	10,583	107,969	983	58,790	167,742
Remainder of divisions ...	—	4	—	—	3	—	3
Total State	45,381	223	11,476	163,780	1,027	60,609	225,416

The production of dried vine fruits—sultanas, currants, raisins and lexias—is confined mainly to the irrigation districts of the Upper Murray, particularly the Renmark, Berri, Loxton and Cobdogla irrigation areas. Sultanas represent 72 per cent of the total quantity of dried vine fruit.

OTHER CROPS

Other crops cultivated in South Australia include field peas, nursery products, cut flowers, pasture seeds, vegetable seeds, chicory and linseed.

In 1966-67, 29,000 acres of field peas were grown for grain yielding 306,000 bushels, virtually all of this area being located in the cereal growing districts north of Adelaide. Field peas are grown mainly as a livestock fodder, or for processing into split peas.

Most of the lucerne and other pasture seeds are grown in the cooler, moist regions, particularly in the South East. During the 1966-67 season the South East produced approximately 30 per cent of the 5,069,000 lb of lucerne seed produced in the State.

A considerable portion of the area devoted to nurseries is found in the vicinity of Adelaide. In addition there are several fruit tree nurseries in the horticultural districts of the River Murray.

PLANTING AND HARVESTING OF CROPS

The main crops of South Australia are normally planted and harvested during periods as listed below.

Usual Months of Planting and Harvesting, South Australia

Crop	Planting	Harvesting
Cereals:		
Wheat	April-June	November-January
Barley	May-July	November-January
Oats	April-June	November-January
Fruit:		
Grapes .....	..	February-May
Citrus .....	..	May-February
Apples .....	..	January-April
Apricots .....	..	December-January
Peaches .....	..	December-March
Pears .....	..	January-April
Vegetables:		
Potatoes	July-January	November-June
Tomatoes;		
Field	September-February	January-June
Glasshouse	March-June	July-January

VALUE AND PRICES OF CROPS

The estimated gross value of agricultural production for South Australia in the 1965-66 season was \$144,017,000. Gross value is defined as the value placed on recorded production at wholesale prices realised in principal markets. Where products are absorbed at a local point or become raw material for a secondary industry the value in each case is presumed to be the value at the principal market. In the following table gross values of principal crops for the seasons 1960-61 to 1965-66 are shown.

Gross Value of Principal Crops, South Australia

Crop	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000					
Cereals:						
Wheat	68,001	51,515	56,285	77,660	74,550	59,559
Barley	37,977	22,952	19,152	26,399	30,135	20,234
Oats	5,618	2,627	3,939	5,219	5,044	3,346
Rye	214	185	170	200	330	206
Grass seeds	1,117	787	1,239	1,956	2,637	2,089
Hay	9,245	4,427	7,034	8,414	8,336	6,923
Green fodder	1,814	1,402	2,204	2,187	3,015	2,692
Field peas	740	522	709	890	892	496
Orchard and berry fruit:						
Citrus	5,157	5,527	5,445	5,578	7,182	6,713
Apples	3,422	3,182	3,944	3,088	3,859	3,744
Apricots	1,934	2,184	2,415	2,749	3,181	2,293
Peaches	1,436	1,556	1,737	1,812	2,490	2,579
Other	2,581	2,476	2,446	2,773	3,154	3,253
Vine fruit:						
Wine grapes	6,715	8,376	5,666	7,888	8,877	7,656
Table grapes	184	151	179	178	189	229
Currants, raisins, etc.....	3,095	3,599	4,024	5,501	7,269	4,944
Vegetables:						
Potatoes	3,192	4,095	2,389	2,340	6,048	4,692
Green peas	1,015	770	864	843	736	647
Other	7,124	6,483	7,297	8,654	8,894	10,021
Other crops	854	1,206	1,278	1,306	1,314	1,701
Total	161,437	124,022	128,417	165,634	178,132	144,017

Market prices of principal crops grown in South Australia for years 1961-62 to 1965-66 are set out below.

Prices of Agricultural Products, South Australia

Crop	Unit	1961-62	1962-63	1963-64	1964-65	1965-66
		\$	\$	\$	\$	\$
Cereals:						
Wheat (a);						
Bulk	bushel	1.516	1.468	1.433	1.412	1.501
Bagged	bushel	1.603	1.547	1.511	1.491	1.597
Barley (a)	bushel	1.121	1.110	1.114	1.153	1.176
Oats	bushel	0.725	0.775	0.611	0.668	0.778
Rye	bushel	1.144	1.225	1.349	1.295	1.161
Vegetables:						
Potatoes (a)	ton	84.71	45.08	45.91	125.18	83.29
Onions	ton	122.50	66.89	100.98	90.33	119.60
Tomatoes;						
Glasshouse	½ case	3.20	3.25	4.10	3.56	3.82
Other	½ case	1.60	1.93	1.66	2.27	2.69
Fruit:						
Apples	bushel	2.38	2.91	2.34	2.40	3.19
Apricots	bushel	3.83	3.57	3.98	5.05	4.61
Peaches	bushel	4.23	4.77	5.22	4.92	4.34
Pears	bushel	3.12	3.38	2.81	2.83	3.36
Oranges;						
Navel (a)	bushel	3.04	2.12	2.62	2.35	2.47
Other (a)	bushel	2.42	1.90	2.35	1.89	2.27
Grapes;						
Table	ton	145.45	166.45	183.20	162.00	189.60
Wine (b)	ton	48.70	48.81	53.00	56.07	58.96

(a) Average price realised.

(b) Weighted average price at winery.

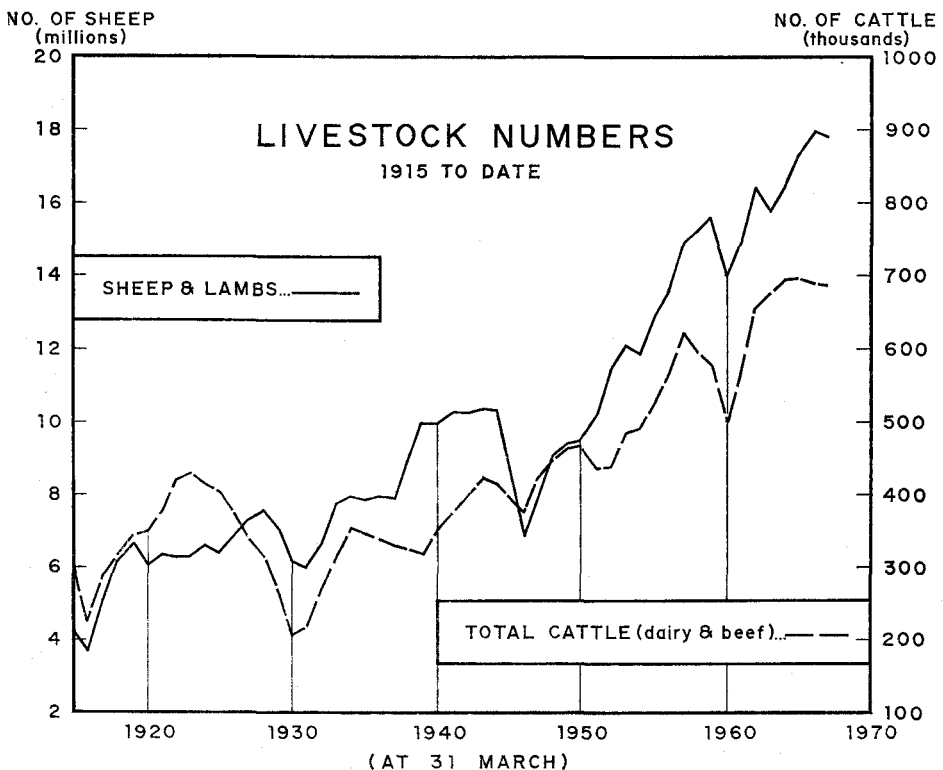
Wheat prices, which were as low as 23c per bushel in 1930-31, have shown little fluctuation in recent years, and have not been below \$1.30 per bushel since the 1948-49 season. Prices of other cereals, however, are subject to marked variations from year to year. For example, since 1947-48, average barley prices per bushel have been as high as \$1.68 and as low as 84c, while in the same period oats prices have been as high as \$1.17 and as low as 42c per bushel.

PASTORAL AND DAIRYING

Pastoral activities, with sheep grazing predominant, are widespread in South Australia, and are pursued under widely varying climatic conditions from the arid saltbush plains in the far north through to the lush, well-watered pastures of the South East. The South East and the moister southern coastal regions provide grazing for a significant portion of the livestock in this State.

At present livestock numbers are at near-record levels having increased markedly in recent years. The bulk of this expansion of the industry has been confined to the heavier rainfall districts. Carrying capacity has been boosted particularly by the introduction and adoption of new and improved pastures.

The increase in numbers of sheep and cattle in South Australia since 1915 is illustrated in the graph below.



The Dog Fence

This fence is an unbroken barrier of wire netting five to six feet high extending for more than 5,000 miles through South Australia, along the South Australia-New South Wales and the New South Wales-Queensland borders and through part of Queensland. It has been erected to protect the sheep lands of these States

from the ravages of dingoes (native dogs). The part of the fence within South Australia, as shown on the map inside the back cover of this volume, extends in a tortuous line from the head of the Great Australian Bight to the New South Wales border for a distance of nearly 1,500 miles. The whole of the sheep population of South Australia is now confined within the area enclosed by the dog fence, which effectively excludes the dingoes.

PASTURES

The significant increase in the area of sown pastures over the past nine years is shown in the following table.

Area Under Pasture^(a), Statistical Divisions, South Australia

Date	Statistical Divisions						Total
	Central	Lower North	Upper North	South Eastern	Western (b)	Murray Mallee	
	'000 Acres						
October							
1958..	928	440	79	1,615	616	520	4,198
1959..	896	254	44	1,428	509	485	3,616
1960..	1,050	340	51	1,790	663	704	4,598
1961..	1,132	374	57	2,025	828	829	5,245
1962..	1,142	366	64	2,140	787	859	5,358
1963..	1,133	365	61	2,246	883	886	5,574
1964..	1,240	411	60	2,431	1,035	1,037	6,214
1965..	1,303	417	63	2,590	1,099	1,089	6,561
1966..	1,310	432	68	2,651	1,193	1,085	6,738

(a) Lucerne, clovers (all kinds), rye grasses (all kinds), cocksfoot, paspalum, phalaris, primrose, sudan and veldt.

(b) Includes Outside of Counties.

To a very large extent the discovery of the relationship between clovers and soil fertility has been responsible for this rapid development of pastures. The nitrogen-building clovers have, in the cereal districts, raised both fertility and crop yields while at the same time providing ready grazing of high nutritional value for livestock. Murray Mallee and Western Divisions have been transformed through the sowing of more and improved pastures from unstable farming districts to highly productive areas.

Until recently most pasture plants available flourished only in the higher rainfall zones and therefore pasture improvement was confined for the most part to the Central and South Eastern Divisions. At that stage Mount Barker sub. clover was the predominant pasture. New varieties have now been introduced, including Clare, Geraldton, Dwalganup and Yarloop sub. clovers. These are suited to the hard setting soils of the important wheatgrowing area extending northward from Adelaide to Jamestown.

Another type of legume, known as medics, has been found to be suitable for the drier cereal country, especially the mallee soils. Five medics are grown: Hannaford, Jemalong Barrel, Harbinger Strand, Gama Paragosa and Snail. Lucerne is also extensively grown; it thrives under irrigation yet still grows in areas with as little as 10 inches of rainfall per annum. It is both salt-resistant and drought-resistant and is grown in most areas of the State. Strawberry clover is the important legume on the black soils of the South East.

The most important perennial grasses in the better rainfall areas are phalaris tuberosa, perennial rye grass and cocksfoot while most widely used in the medium to low rainfall areas is the annual, wimmera rye grass. The naturalised annual grasses which occur over the whole of the State contribute substantially to total pasture production.

Details of fertilisers used on pasture are given on pages 337-9.

SHEEP

Numbers and Distribution

The pastoral industry was the first to become established, mainly because there was an assured overseas market for wool, hides and tallow. The fertile plains north of Adelaide, as well as the Adelaide hills, offered ready grazing and by 1856, only twenty years after the first settlement, there were about 2 million sheep in the State. This trend continued with sheep numbers increasing to 7.6 million in 1891, a peak that was not exceeded until 1932.

The severity of the droughts during this period is reflected in the reduced flocks of 1902 (4.8 million) and 1915 (3.7 million).

After 1932 sheep numbers steadily increased, exceeding 10 million by 1940, but again a drought severely reduced the numbers to less than 7 million in 1946. Thereafter the sheep population increased steadily as improved farming techniques raised the grazing capacity of the pastoral and wheat-sheep zones. At 31 March 1966 a record 17,993,000 sheep were being maintained, but drought slightly reduced the number to 17,864,000 at 31 March 1967.

By far the greatest concentration of sheep is in the South Eastern Division, particularly in the southern portion of the division where the high rainfall and fertile soils provide ample year-round grazing. In the upper South East large scale land development schemes have, in the last decade, doubled the sheep carrying capacity in many areas by the application of trace elements to deficient soils.

A similar scheme was undertaken on Kangaroo Island (Central Division) where the sheep population rose from 258,000 in 1956 to 744,000 in 1967. Central Division contains the next largest sheep population with sheep fairly evenly distributed throughout, heaviest concentrations being on Yorke Peninsula, Kangaroo Island and in the southern Adelaide hills region.

In Western Division sheep grazing is concentrated mainly in the southern portion of Eyre Peninsula. The only other division with more than 2 million sheep is Lower North where a large proportion of sheep raising is associated with cereal growing.

Sheep Numbers, Statistical Divisions, South Australia

At 31 March

Year	Statistical Division							Total
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee	Outside of Counties	
	'000							
1958.....	3,227	2,058	1,200	3,968	2,346	1,364	1,074	15,237
1959.....	3,392	2,079	1,190	3,930	2,461	1,381	1,201	15,634
1960.....	2,969	1,678	1,081	3,591	2,168	1,271	1,267	14,025
1961.....	3,298	1,927	1,054	3,932	2,298	1,393	1,050	14,952
1962.....	3,670	2,191	1,111	4,315	2,514	1,649	965	16,415
1963.....	3,466	1,941	1,038	4,444	2,366	1,529	965	15,738
1964.....	3,619	2,114	1,135	4,375	2,460	1,592	1,107	16,402
1965.....	3,804	2,156	1,087	4,945	2,532	1,684	1,081	17,289
1966.....	3,830	2,091	1,113	5,508	2,553	1,816	1,082	17,993
1967.....	3,844	2,035	1,080	5,584	2,607	1,619	1,093	17,864

PRODUCTION

Between 1960 and 1966 there has been a big increase in the number of sheep but a fall in the number of flocks—the number of smaller flocks (less than 500 sheep) has fallen quite considerably.

The distribution in statistical divisions of sheep flocks classified by size of flock at 31 March 1966 is given in the following table.

Sheep Flocks Classified by Size of Flock, Statistical Divisions, South Australia
At 31 March 1966

Number of Sheep in Flock	Statistical Division							Total
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee	Outside of Counties	
	Number of Flocks							
Under 50	722	121	27	175	21	72	—	1,138
50- 99	311	65	17	65	18	29	—	505
100- 199	556	160	44	109	28	56	1	954
200- 499	1,435	760	266	362	209	322	2	3,356
500- 999	1,412	908	251	523	852	750	3	4,699
1,000- 1,999	806	433	215	972	730	508	9	3,673
2,000- 4,999	329	113	90	790	223	114	25	1,684
5,000- 9,999	23	23	25	135	18	10	32	266
10,000-19,999	4	7	9	26	5	2	24	77
20,000 or more	—	—	—	3	3	2	12	20
Total flocks ...	5,598	2,590	944	3,160	2,107	1,865	108	16,372

At present about 21 per cent of the total sheep population consists of lambs and hoggets under one year. This proportion has remained fairly constant for a number of years although it is subject to some fluctuations. For example, as the next table shows, lamb numbers, which had fallen after some relatively poor lambing seasons, were built up considerably during the 1961-62 season.

Age and Sex of Sheep, South Australia

At 31 March

Year	Rams	Breeding Ewes	Other Ewes	Wethers	Lambs and Hoggets (under one year)	Total Sheep
	'000					
1958	189	6,579	1,045	3,987	3,437	15,237
1959	198	7,284	826	4,264	3,062	15,634
1960	188	6,489	883	3,588	2,877	14,025
1961	187	7,397	690	3,854	2,824	14,952
1962	190	7,531	786	4,110	3,798	16,415
1963	196	7,258	812	4,144	3,328	15,738
1964	199	7,545	772	4,277	3,609	16,402
1965	208	7,938	813	4,515	3,815	17,289
1966	218	8,165	831	4,694	4,085	17,993
1967	220	8,331	804	4,729	3,780	17,864

Breeds of Sheep

The predominant breed in South Australia is the Merino which accounts for over 80 per cent of the total sheep numbers. The South Australian Merino having a robust constitution and a capacity to travel long distances to water has adapted well to the hot, dry conditions of the interior. Because of the particularly arid nature of the South Australian climate, pioneer breeders have developed a large framed type of Merino, yielding an exceptionally high clip of medium to broad quality wool.

Of the remaining recognised breeds, the Australasian breeds, Corriedale and Polwarth, are most important. These are dual purpose sheep, used for mutton

and at the same time producing wool of good quality. The Corriedale is a fixed cross between Lincoln rams and Merino ewes while the Polwarth is a fixed comeback bred from the mating of Merino rams with Lincoln-Merino ewes. British longwools (Border Leicester, Cheviot and Romney Marsh) are used for mating with the Merino or crossbred ewes mainly to produce fat lambs but also useful types of comeback and crossbred wools. British shortwools (Dorset Horn, Ryeland, Suffolk, Southdown and Shropshire) are utilised principally for production of export lambs.

Breeds of Sheep, South Australia
At 31 March

Breed	1963	1964	1965	1966	1967
	'000				
Merino	13,152.7	13,897.0	14,581.2	14,981.0	14,856.9
Corriedale	943.7	923.0	1,003.2	1,092.9	1,158.6
Dorset Horn	39.3	41.4	42.0	44.7	46.5
Border Leicester	26.0	19.6	19.4	22.9	26.6
Polwarth	88.4	80.8	99.7	104.0	104.4
Romney Marsh	29.9	25.8	26.3	23.4	23.9
Ryeland	5.0	4.8	4.3	4.5	4.4
Southdown	6.6	5.8	5.5	5.5	5.4
Suffolk	16.7	15.9	13.4	14.7	16.7
Other	4.7	4.0	4.1	4.1	3.4
Merino-Comeback ...	285.8	257.7	284.2	260.7	220.1
Crossbred	1,138.7	1,126.7	1,205.2	1,434.7	1,396.7
Total	15,737.5	16,402.5	17,288.5	17,993.1	17,863.6

Lambing

In 1966 a record number of ewes (7,583,000) were mated and lambs marked totalled 5,974,000. Early reports from farmers indicated that they intended to mate more than 8.2 million ewes in 1967—approximately 5.4 million to Merino rams, 1.4 million to other longwool rams and 1.4 million to shortwool rams.

The lambing percentage (*i.e.* of lambs marked to ewes mated) has never quite reached 80 per cent in South Australia, although it has been regularly over 70 per cent for a number of years. This represents a considerable improvement over the period prior to the 1939-45 War when the percentage quite often fell below 60 per cent and occasionally below 50 per cent in drought years. Details of lambs marked and the lambing percentage in each statistical division in recent years are given in the next table.

Lambing, Statistical Divisions, South Australia

Season	Statistical Division							Total
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee	Outside of Counties	
LAMBS MARKED ('000)								
1962.....	1,343	841	366	1,322	675	633	263	5,443
1963.....	1,282	778	346	1,371	679	587	359	5,402
1964.....	1,400	893	359	1,384	751	675	277	5,739
1965.....	1,426	823	372	1,630	735	681	287	5,954
1966.....	1,372	829	380	1,672	758	649	314	5,974
LAMBING PERCENTAGE (a)								
1962.....	82.2	80.3	74.8	83.2	72.3	78.7	60.4	78.5
1963.....	80.9	77.5	71.8	84.9	73.5	75.6	77.4	78.9
1964.....	83.5	81.4	71.4	84.6	76.3	79.7	62.1	79.8
1965.....	82.7	77.3	72.4	86.8	74.0	78.2	62.1	79.3
1966.....	81.1	79.7	75.3	84.0	74.8	75.3	65.4	78.8

(a) Percentage of lambs marked to ewes mated.

Sheep Shearing and Wool-clip

In the agricultural areas of the State there is a predominance of shearing during the late winter and spring months, August to November. Shearing in the South Eastern Division occurs somewhat later, with some 75 per cent of the wool-clip being obtained in the period October to November. In the northern pastoral areas (Outside of Counties) there are two main seasons, March-April and July-August.

The total wool clip, including crutchings, exceeded 200 million lb for the first time in 1964-65. More than 90 per cent of this wool is obtained from adult sheep.

The average fleeceweight in South Australia is well over 12 lb per head for adult sheep. This is significantly higher than the yield obtained in other States, and is due primarily to the larger size of the South Australian Merino, its broader wool quality and longer thicker-stapled fleece.

Sheep and Lambs Shorn, Wool-clip and Average Fleeceweight, South Australia

Classification	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
NUMBER SHORN ('000)						
Sheep	13,798	14,442	14,096	14,832	15,468	16,073
Lambs	3,879	3,417	3,540	3,911	4,282	3,962
Total	17,677	17,859	17,636	18,743	19,751	20,035
WOOL CLIP ('000 LB)						
Sheep	168,750	168,647	172,588	175,998	186,812	194,626
Lambs	14,776	12,419	13,137	14,829	15,975	15,467
Crutchings	8,679	8,788	9,062	9,232	9,958	10,279
Total	192,205	189,854	194,787	200,059	212,745	220,372
AVERAGE FLEECEWEIGHT (a) (LB)						
Sheep	12.86	12.29	12.89	12.49	12.72	12.75
Sheep and lambs	10.87	10.63	11.04	10.67	10.77	11.00

(a) Includes crutchings.

A breakdown of the State figures for 1966-67 by statistical divisions is given in the next table. This shows the high average fleeceweight obtained in the northern pastoral areas (Outside of Counties) and to a lesser extent Upper North Division.

The relatively light average fleece obtained in South Eastern Division is explained partly by the lower proportion of Merino sheep in this area (at 31 March 1967 only 68 per cent of total sheep in South Eastern Division were Merinos, compared with a total State figure of over 83 per cent), but more importantly by the lighter wool quality of the Merino and the smaller framed sheep in this area.

Sheep and Lambs Shorn, Wool Clip and Average Fleeceweight
Statistical Divisions, South Australia
1966-67

Classification	Statistical Division							Total
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee	Outside of Counties	
	NUMBER SHORN ('000)							
Sheep	3,505	1,859	969	5,011	2,303	1,548	877	16,073
Lambs	796	517	277	1,228	548	373	223	3,962
Total	4,301	2,377	1,246	6,239	2,851	1,922	1,100	20,035
	WOOL CLIP ('000 lb)							
Sheep	40,765	23,538	13,103	56,730	29,089	18,765	12,635	194,626
Lambs	2,917	2,029	1,212	4,791	1,888	1,360	1,271	15,467
Crutchings	2,196	1,254	665	2,888	1,540	1,060	676	10,279
Total	45,878	26,821	14,981	64,409	32,517	21,185	14,581	220,372
	AVERAGE FLEECEWEIGHT (a) (lb)							
Sheep	12.26	13.33	14.20	11.90	13.30	12.80	15.18	12.75
Sheep and lambs ..	10.67	11.28	12.02	10.32	11.41	11.02	13.26	11.00

(a) Includes crutchings.

WOOL INDUSTRY

Organisation of the Australian Wool Industry

The *Wool Industry Act* 1962 made provision for the replacement of three separate instrumentalities (the Australian Wool Bureau, the Wool Research Committee and the Australian Wool Testing Authority) by a single overall body, to be known as the Australian Wool Board. The Board is thus responsible for the control and co-ordination of wool promotion, research and testing and acts as an advisory authority on wool marketing. The Board was inaugurated on 1 May 1963, being made up of eleven members, *viz* a chairman, six woolgrower representatives, three members with special qualifications and a representative of the Commonwealth Government.

Following the establishment of the Board, the Australian Woolgrowers and Graziers Council and the Australian Wool and Meat Producers Federation formed the Australian Wool Industry Conference. Principal functions of the Conference are to nominate woolgrower representatives for appointment to the Australian Wool Board; to recommend what rates of levy should be paid by woolgrowers for promotion and research, and to review the activities of the Board at least once a year. For research and promotional purposes levies have been imposed on shorn wool produced in Australia since 1936. The rate levied was 5 cents per bale until 1944 and 20 cents per bale in 1945. The levy was suspended in 1945 and contributory charges were imposed on woolgrowers. In 1952 the levy was resumed and set at 40 cents per bale; on 1 August 1960 it became 50 cents per bale; and during the 1961-62 season the levy was raised to \$1.00 per bale. In addition, the wool research levy was introduced in 1957 and was set at 20 cents per bale.

From 1 July 1964 a new levy, which includes the amount to be allocated to research, was fixed at a maximum rate of 2 per cent of the gross value of shorn wool sold. For 1964-65 the rate for the combined levy was $1\frac{7}{8}$ per cent and for 1965-66 and 1966-67 it was 2 per cent. Following an amendment to the Wool Industry Act in 1967, the Government will contribute towards wool research and promotion, on a dollar for dollar basis matching the woolgrowers' contribution

by levy, to a maximum of \$14 million in any one year during the three financial years 1967-68 to 1969-70. Under these arrangements the Government contribution will increase by between \$3-4 million annually.

Production of Wool

With the average cut per head increasing over time wool production has been increasing at a greater rate than the sheep population, and in fact has more than doubled in the past twenty years.

Total wool production consists of shorn wool (including crutchings) plus fellmongered wool, dead wool and wool exported on skins. Fellmongering is the process of removing wool from the pelt by bacterial action (sweating) or by treatment with chemicals. Dead wool is picked from the carcass of dead sheep.

Wool Production and Value, South Australia

Season	Production				Value of Wool Production
	Shorn Wool	Fell-mongered and Dead Wool	Wool Exported on Skins	Total	
	'000 lb	'000 lb	'000 lb	'000 lb	\$'000
1957-58	168,194	1,827	15,822	185,843	84,708
1958-59	170,645	1,353	14,844	186,842	67,595
1959-60	180,236	733	17,320	198,289	85,382
1960-61	162,876	713	13,824	177,413	70,484
1961-62	192,205	1,670	13,109	206,984	85,801
1962-63	189,854	952	16,538	207,344	92,514
1963-64	194,787	15,713		210,500	113,409
1964-65	200,059	15,677		215,736	94,328
1965-66	212,745	16,888		229,633	103,635
1966-67	220,372	17,122		237,493	104,588

By 1891 wool production had risen to 57 million lb when the average fleece weight was nearly 8 lb per head. Then with sheep numbers at a slightly lower level, wool production fluctuated seasonally between 36 million and 64 million lb until 1925 when it rose to 69 million lb.

The effects of the four year drought from 1927 to 1930 temporarily reduced the level but the improvement of the following seasons and the subsequent restocking caused a sharp increase in production. In 1938 the weight of wool produced exceeded 100 million lb for the first time. Production then remained relatively stable until 1945-46 when it dropped significantly following the reduction in flocks caused by the 1944 drought. The industry recovered quickly and in 1947-48 a record 116 million lb of wool had been produced, achieved by an increase in the numbers shorn and an exceptionally high average fleece of 10.87 lb. The rising trend has since continued with current production now exceeding 230 million lb.

Prior to 1946-47 the annual wool value had not exceeded \$14 million and was relatively stable. The marked changes in the value of wool produced since then have been mostly due to frequent and substantial price fluctuations rather than variations in the quantity produced. On the resumption of the auction system in 1946-1947 wool prices increased sharply, reaching a peak in the record 1950-51 season. Gross value of production in that year exceeded \$132 million.

Demand eased in the following years causing values to fall, although a recovery in prices combined with a significant increase in production in 1956-57 raised gross value of production to \$114 million. Over the seasons 1957-58 to 1962-63 value varied between \$67 million and \$92 million but rose to \$113 million in 1963-64 following record wool production and somewhat higher prices. Since then wool prices have tended to stabilise at a lower level but by 1966-67 the gross value had risen to \$104 million due to consecutive years of record wool production.

Quality of Wool

In general terms, quality refers to the diameter of wool fibre, which is usually indicated by the evenness and number of crimps or waves. Crimp is the main determinant of quality; the smaller and more even the crimp, the finer the wool.

Fineness is generally specified in terms of spinning ability, and in Australia is expressed generally in terms of Bradford Counts, which in practice, signify the number of hanks of yarn, each measuring 560 yards, obtainable from one pound weight of tops if spun to its fullest capacity. There are no commercial means of testing a batch of wool in its greasy state and therefore quality counts must of necessity be estimates based on the experience of the wool expert. Quality counts range from as high as 90s to 100s for superfine Merino down to 32s for some English long wool breeds.

Other factors influencing grading are soundness (tensile strength), length of staple, condition, colour and style.

The South Australian Merino generally produces wool of a much broader quality than the Merino of the eastern States. The following table shows that only 0.1 per cent of wool sold in the 1966-67 season was 64/70s and finer; the corresponding New South Wales figure was 14.7 per cent.

Quality Analysis of Greasy Wool Sold at Auction in South Australia

Predominating Quality of Bale	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
	Per Cent						
64/70s and finer	0.3	0.2	0.2	0.2	0.3	0.1	0.1
64s	1.3	1.2	1.3	1.0	1.1	0.7	0.5
64/60s	4.8	4.2	6.1	5.5	5.3	4.9	3.5
60/64s	16.0	15.6	17.5	15.8	15.1	16.2	13.5
60s	40.5	40.6	39.8	42.1	41.4	43.3	41.0
58s	26.2	26.9	24.3	24.6	25.2	23.9	28.8
56s	6.8	7.3	7.1	6.9	7.6	7.4	8.8
50s	1.8	2.0	1.6	1.6	2.0	1.9	2.1
Below 50s	0.4	0.4	0.3	0.3	0.4	0.3	0.4
Oddments	1.9	1.6	1.8	2.0	1.6	1.3	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The quality distribution of wool has remained relatively constant with over 80 per cent classified between 58s and 60/64s quality. In the following table bales of wool of South Australian origin sold at auction in Australia in the 1966-67 season are classified by spinning quality and the statistical division of origin.

**Quality of Greasy Wool^(a), Statistical Divisions, South Australia
1966-67**

Predominating Spinning Quality	Statistical Division of Origin							Total (b)
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee	Outside of Counties	
	Bales							
64/70s and finer....	263	12	12	1,799	70	74	—	2,230
64s	201	376	138	2,844	138	320	330	4,351
64/60s	2,500	1,122	1,424	7,351	2,640	3,509	1,797	20,343
60/64s	14,615	6,828	5,010	24,950	16,346	12,408	4,418	84,658
60s	25,577	12,210	8,852	33,173	24,669	14,983	7,307	126,802
60/58s	24,844	14,070	8,480	24,482	20,642	10,699	7,094	110,349
58s	39,454	24,193	14,388	42,477	21,771	11,907	14,418	168,663
56s	18,485	4,838	2,536	27,958	4,427	3,117	3,319	64,693
50s	6,031	120	22	13,035	638	640	16	20,510
Below 50s	775	38	9	4,289	83	213	4	5,412
Oddments	1,195	356	268	3,331	1,416	1,361	886	8,813
Total	133,940	64,163	41,139	185,689	92,840	59,231	39,589	616,824

(a) Wool of South Australian origin sold at auction in Australia.

(b) Including bulk-classed, interlotted and dealers' wool sold in Adelaide, but of unidentified origin.

The incidence of vegetable matter reduces the yield of all wool types. If the extent of vegetable fault is greater than 14 per cent of the wool's greasy weight the wool has to be treated by the carbonising process.

In a normal season just over 75 per cent of South Australian wool is free of, or contains only light burr and seed; almost 15 per cent contains medium or heavy burr and seed and some 10 per cent is carbonising wool.

Incidence of Vegetable Fault in Wool Sold at Auction In South Australia

Season	Free or Near Free	Light Burr and/or Seed	Medium Burr and/or Seed	Heavy Burr and/or Seed	Carbon- ising Wool	Combing Oddments	Total
	Percentage of Total Number of Bales						
1957-58 ..	34.9	37.2	11.8	3.0	11.4	1.7	100.0
1958-59 ..	35.5	38.1	11.7	2.6	10.4	1.7	100.0
1959-60 ..	35.7	36.9	12.4	3.6	10.1	1.3	100.0
1960-61 ..	39.4	38.3	9.9	1.9	8.7	1.8	100.0
1961-62 ..	38.6	37.4	10.2	2.2	10.1	1.5	100.0
1962-63 ..	34.9	40.5	11.2	2.6	9.0	1.8	100.0
1963-64 ..	32.9	44.7	10.5	2.3	7.7	1.9	100.0
1964-65 ..	27.8	45.1	12.5	3.2	9.8	1.6	100.0
1965-66 ..	26.8	43.3	14.2	3.8	10.6	1.3	100.0
1966-67 ..	31.5	44.8	11.0	2.4	9.0	1.3	100.0

Wool Marketing

Approximately 8 per cent of wool grown in South Australia is sold outside the auction system. Of the South Australian wool passing through the auction system approximately 85 per cent is sold at the Adelaide Sales with the remainder, predominately of South Eastern origin, going to Victorian selling centres. A similar inflow of wool occurs from western New South Wales and to a lesser extent from western Victoria.

On receipt into a wool store each bale is weighed and then stacked. When a catalogue is to be prepared for the buyers, clips are listed and particulars of the various lots to be shown are supplied by the broker. A proportion of the required bales is then taken from the stacks and sent to the show floors for inspection. A valuation of every lot, based on current market rates is made by the broker for the protection of the grower at the auction.

At the Wool Exchange, the sales are conducted with great rapidity taking on average for a normal market only eight seconds to dispose of an individual lot or line of wool. On completion of the sale the bales are returned to the stacks to await instructions from the buyers. When required for shipment the bales are usually dumped, *i.e.* pressed to half their original size and banded to economise on shipping space.

Adelaide is the sole wool selling centre in South Australia, handling over half a million of Australia's 5 million bales annually. Twelve or thirteen sales are held each season depending on the quantity of wool expected to be offered.

During the main spring shearing season sales are held every two or three weeks, lengthening to monthly or longer intervals over the remainder of the year. Pastoral wools provide the bulk of the offerings in the early spring months with agricultural wools becoming more prominent as the season progresses. Wools from the South East and other high rainfall areas make up a considerable proportion of the offerings in the summer months. Towards the end of the season wools are drawn from various parts of the State.

Details relating to Adelaide wool sales during the past eight seasons compared with 1950-51, the year of boom prices, are as follows:

Adelaide Wool Sales

Season	Wool Sold (Scoured and Greasy)		Amount Realised	Average Price Per Lb (Greasy)	In Store at End of Season
	Bales	Weight			
	Number	'000 Lb	\$'000	Cents	Bales
1950-51 ..	383,630	117,032	125,956	107.63	6,304
1959-60 ..	502,820	155,677	69,827	44.85	38,997
1960-61 ..	495,021	158,560	63,644	40.14	55,607
1961-62 ..	573,002	182,630	75,956	41.59	41,359
1962-63 ..	563,370	180,672	81,064	44.87	33,900
1963-64 ..	569,845	182,560	98,983	54.22	41,033
1964-65 ..	570,976	179,066	79,045	44.14	52,853
1965-66 ..	591,641	187,129	87,402	46.71	40,197
1966-67 ..	571,337	181,819	82,220	45.22	56,076

Reserve Price Scheme

A Wool Marketing Committee was appointed by the Australian Wool Board on 20 June 1963 to inquire into current methods of marketing wool and in particular to investigate the operation of a Reserve Price Scheme within the auction system.

In its report of July 1964, the Committee made the following recommendations:

The Australian clip should be marketed by a Reserve Price Scheme under the control of a statutory body to be known as the Australian Wool Marketing Authority.

At the commencement of each wool selling season the Authority should set a floor price based on:

- (a) the level of reserve prices fixed by other countries,
- (b) the average price for wool in the previous season,
- (c) economic conditions in the major consuming countries, and
- (d) the relationship between price of wool and other competitive fibres.

In addition to setting the average reserve price, the Authority should prepare a 'Table of Limits', *i.e.* corresponding reserve prices for each of the types of wool offered, and should buy in at the floor price when any lot fails to reach this reserve. Wool bought by the Authority would then be placed on the market at some later date when prices were more favourable.

For the effective operation of the scheme, a capital fund should be established from contributions by growers and the government.

A referendum of woolgrowers throughout Australia rejected this scheme. Overall, 52 per cent of woolgrowers voted against the scheme, but in South Australia 65 per cent were not in favour.

Wool Prices

Prices paid for wool sold in South Australia tend to be on average less than prices realised in other States, this being partly attributable to the large proportion of medium to broad quality wools grown in South Australia and in western New South Wales.

Average prices realised for greasy wool at Adelaide sales were below 6 cents per lb in the depression years of the early 1930s and then fluctuated between about 8 and 12 cents. Between 1945-46 and 1949-50 the price rose sharply to 48 cents and more than doubled to nearly 108 cents in 1950-51. There was an immediate drop to half this level in the following year and since then prices have been somewhat more stable, the lowest level in recent years being 38 cents and the highest 54 cents. Details of average prices of greasy Merino and Crossbred wool of various grades over the last ten seasons are given below.

Average Wool Prices, Adelaide Sales

Description	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
Cents per Lb										
Greasy Merino:										
Superior	75	55	66	58	64	69	82	65	76	71
Good	64	48	57	50	52	59	70	57	67	65
Average	55	44	51	45	47	54	62	51	58	56
Wasty and inferior	45	36	42	38	39	43	53	41	47	46
Super lambs	60	45	55	50	53	58	71	67	62	57
Good lambs	42	35	41	37	38	42	50	45	47	42
Average lambs	30	22	27	25	23	27	38	31	34	29
Inferior lambs	23	17	21	17	20	21	28	24	26	23
Greasy Crossbred:										
Super Comebacks	68	53	62	52	57	62	77	59	68	64
Fine Crossbred ..	62	51	57	53	54	60	75	57	67	60
Medium Crossbred	54	46	54	52	51	55	72	52	63	53

CATTLE

In comparison with other States, cattle grazing is not a major industry in South Australia. Of the cattle in Australia at 31 March 1967 only about 3 per cent of those used mainly for meat production and a little over 5 per cent of those for milk production were in South Australia.

Cattle Numbers, Statistical Divisions, South Australia

31 March 1967

Classification	Statistical Division							Total
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee	Outside of Counties	
	'000							
Associated with milk production:								
Bulls (a)	3.0	0.6	0.2	1.5	0.2	0.5	0.0	6.0
Cows:								
In milk ...	61.3	4.4	1.3	11.5	1.7	9.5	0.0	89.7
Dry	26.7	3.2	1.0	23.6	1.2	3.2	0.0	58.8
Heifers:								
Springing ..	10.7	0.9	0.2	8.4	0.3	1.4	—	21.9
Other	16.7	0.9	0.3	4.8	0.3	2.3	0.0	25.3
Calves under one year	20.9	2.3	0.6	10.9	1.2	3.5	0.0	39.4
House cows ..	1.8	0.8	0.4	1.7	1.2	0.8	0.1	6.7
Total	140.9	13.0	4.0	62.3	6.1	21.2	0.1	247.6
Associated with meat production:								
Bulls (a)	2.0	0.7	0.3	4.5	0.6	0.4	1.7	10.2
Cows and heifers	41.6	9.5	6.8	113.3	9.2	10.0	48.2	238.7
Calves under one year	22.6	6.0	2.7	59.9	6.2	7.2	23.8	128.5
Other cattle	8.7	1.7	1.0	27.2	1.2	2.5	19.8	62.0
Total	74.8	18.1	10.8	204.8	17.3	20.2	93.5	439.4
Total cattle	215.7	31.1	14.8	267.2	23.4	41.3	93.6	687.0

(a) Aged one year or over, used or intended for service.

Beef Cattle

Beef cattle numbers have increased rapidly in the last fifteen years, exceeding 200,000 for the first time in 1952 and passing 300,000 by 1956. At 31 March 1967, 439,000 cattle associated with meat production were recorded, and although this figure is not strictly comparable with earlier figures (because of a change of classification adopted in 1964) it provides a good guide to the growth of the industry. In 1967 about 47 per cent of beef cattle were in the South Eastern Division, 21 per cent were Outside of Counties, 17 per cent in Central Division, and smaller numbers in other parts of the State. In the northern pastoral areas, Shorthorns are the predominant breed and there are lesser numbers of Herefords; in the South East, Herefords and Shorthorns are the main breeds and there are substantial numbers of Aberdeen Angus, while in the Central Division near Adelaide, where a number of studs are located, several breeds are well represented.

The northern pastoral region is traditionally the breeding area for beef cattle but in recent years there has been a trend towards moving cattle which were bred in this drier country to the better rainfall areas for fattening. The rapid increase in the area of sown pastures has contributed to the increase of beef cattle in southern parts of the State, since cattle do not crop the grasses as closely as sheep and thus are less likely to damage newly sown pastures.

Until recently most of the beef cattle were Outside of Counties, and it was not until 1957 that numbers in this area represented less than 50 per cent of the State total. The marked switch during the last sixteen years from Outside of

Counties to the South East, and to other parts of the State, is illustrated in the following table. The actual number of beef cattle in Outside of Counties in 1967 was 93,000 compared with 115,000 in 1950.

Proportion of Beef Cattle in Statistical Divisions, South Australia

Statistical Division	1950	1953	1957	1961	1967 (a)
	Per Cent				
Central	7	8	10	13	17
South Eastern	25	24	31	40	47
Outside of Counties	60	59	49	34	21
Other areas	8	9	10	13	15
Total	100	100	100	100	100

(a) Proportions relate to 'Cattle for meat production'.

Dairy Cattle

Dairy cattle numbers have not increased to any degree for many years and the total number of cattle associated with milk production at 31 March 1967 was 248,000. Distribution within the State is also little changed although there has been some tendency for concentration in the principal dairying areas.

Properties in South Australia on which dairying is the main activity are situated mainly in the areas where high rainfall or irrigation permits the growing of sown pastures, but many of the mixed farms in the better cereal growing country carry dairy herds. Dairy production on these farms is almost entirely in the form of cream for butter making, whereas the properties in the sown pasture areas mainly market whole milk, either for consumption in the Adelaide area or for cheese making.

Commercial dairying activities are to be found mainly within an eighty mile radius of Adelaide. Of greatest importance is the Adelaide hills district, comprising the Mount Lofty Ranges and areas as far south as Cape Jervis and Encounter Bay. This district embraces some of the best dairy land in the State and includes most of the properties devoted specifically to dairy farming. Although some herds are grazed on natural pastures improved only by top dressing with superphosphate, the most common type is sown pasture consisting of subterranean clover in combination with perennial grasses such as perennial rye grass or phalaris.

Dairy production is mainly in the form of whole milk for consumption in Adelaide but the surplus from the flush period of the year is converted into cheese at factories situated at several centres throughout the Adelaide hills.

Most of the dairy breeds are represented; Friesians and Jerseys predominate, with Guernseys, Australian Illawarra Shorthorn, Ayrshires and their crosses in use to a lesser extent.

Other areas inside the eighty mile radius are the Lower Murray swamps and the Lakes District. The Lower Murray swamps extending from Mannum to Wellington are reclaimed areas ideally suited to dairying pursuits, combining the attributes of suitable climate, good soil, and convenient location and an abundant water supply. The swamps have a very high carrying capacity. A significant proportion of the produce is sold as whole milk in the Adelaide market, the remainder being used for cheese, butter and casein production. The cattle are predominantly Friesian. The farms are flood irrigated through sluice gates in the levees and

distributing channels. Surplus water is led into a drainage system and pumped back into the river.

The Lakes District owes much to the completion of barrages across the mouth of the Murray which has helped to maintain the waters of Lake Alexandrina and Lake Albert in a reasonably fresh state. This has greatly contributed to the improvement of productivity of this area and has also had the effect of maintaining a greater control over the level of the water in the river, thereby greatly facilitating irrigation of the reclaimed swamps upstream. The outlet for dairy products is generally towards the processing plants situated on the Murray. On the eastern side both cream and milk are produced whilst on the western side most of the produce is sold as whole milk. Where cream is produced, pig-raising is complementary to dairying. The dairy cattle are principally Jersey breed and enjoy a high reputation for productive ability.

Outside the eighty mile radius, the most important dairying area is the Lower South East, where the high rainfall and the reasonably low evaporation rate combine to allow a fairly long growth period after the autumn and winter rains and spring flush of feed. The intensity of dairying varies with the different areas, being greatest on the richer soils. These soils are the peat and peat-type soils close to the coast and the rich volcanic soils around Mount Gambier.

Most breeds are well represented in the district, the Jersey and Friesian being slightly more popular than other breeds.

DAIRY PRODUCE

Milk

Total milk production in any one year is not known precisely. However, as actual details are known of two major components of total milk utilisation in South Australia, viz the amount consumed by factories in the production of milk, cheese and other milk products and home consumption in the Metropolitan Milk Board area, a carefully considered estimate can be made.

The following table shows the estimated production of whole milk and the quantity of this milk used for various purposes in 1956-57 and later seasons.

Production and Utilisation of Milk, South Australia

Year	Total Milk Produced	Milk Used for					
		Butter		Factory Cheese (a)	Home Consumption		Other Purposes
		On Farm	In Factory		Milk Board Area	Outside Milk Board Area	
'000 Gallons							
1956-57	89,882	919	36,278	25,963	15,359	9,984	1,379
1957-58	80,606	802	29,886	23,012	15,536	9,908	1,462
1958-59	82,121	783	29,879	24,280	16,267	9,379	1,533
1959-60	78,572	720	25,892	23,729	16,999	9,636	1,596
1960-61	87,029	645	29,817	27,504	17,591	9,800	1,672
1961-62	95,504	604	33,100	32,314	17,859	9,907	1,720
1962-63	95,378	553	31,229	33,492	18,282	10,206	1,616
1963-64	97,523	531	32,622	33,989	18,631	9,791	1,959
1964-65	102,330	458	33,435	37,857	18,991	9,805	1,784
1965-66	98,398	432	30,921	35,659	19,558	9,927	1,899

(a) Factory production accounts for virtually all cheese produced.

The Metropolitan Milk Board is constituted to regulate the treatment and marketing of milk within the Metropolitan Milk Board area. The duties of the Board include the fixing of the metropolitan producing district and the granting of milk producers and treatment licences. The Board may fix the prices of milk and sweet cream and may make recommendations on the quotas of milk and cream which can be sold as such.

Butter and Cheese

The quantities of butter and cheese produced during the last ten years were as follows:

Butter and Cheese Production, South Australia

Year	Butter (a)	Cheese (b)	Year	Butter (a)	Cheese (b)
	'000 Lb			'000 Lb	
1956-57	19,260	26,787	1961-62	16,861	32,835
1957-58	16,061	23,510	1962-63	16,608	33,967
1958-59	16,103	25,088	1963-64	16,791	34,236
1959-60	14,151	24,483	1964-65	17,392	38,836
1960-61	15,610	28,245	1965-66	16,326	36,281

(a) Includes factory and farm production.

(b) Factory production only.

PIGS

In South Australia pigs are normally kept as a sideline on mixed farms or in conjunction with dairy cattle and there are relatively few holdings specialising in pigs.

Although there are substantial fluctuations in the pig population from year to year induced by the exceptional variability of prices, over time the numbers have remained remarkably stable. The total number exceeded 200,000 for the first time in 1966, yet it was over 160,000 as early as 1884. Of the record number of 223,500 pigs at 31 March 1966, over 60 per cent were in Central and Lower North Divisions. The total number of 222,300 pigs at 31 March 1967 was made up of 3,900 boars, 28,600 breeding sows and 189,900 other pigs.

MEAT PRODUCTION AND MARKETING

South Australia is a relatively small meat producer, providing only about 6 per cent of total Australian production. The Metropolitan and Export Abattoirs Board has the sole right within the Metropolitan Abattoirs area to slaughter stock for export as fresh meat in a frozen condition. It controls the handling and distribution of meat within this area and may fix the maximum number of stock sold in any one day in a Board controlled market. The following table shows the number of livestock slaughtered for human consumption and the production of meat during the last ten years. Slaughterings and meat production on rural holdings are included in these figures.

Livestock Slaughtered and Meat Produced, South Australia

Season	Livestock Slaughtered for Human Consumption			Meat Production (Bone-in-Weight)			
	Cattle and Calves	Sheep and Lambs	Pigs	Beef and Veal	Mutton and Lamb	Pigmeat	Total
		'000			Tons		
1957-58 ..	283	3,278	175	41,070	53,681	9,516	104,267
1958-59 ..	287	3,145	179	42,167	55,001	9,451	106,619
1959-60 ..	238	3,899	171	33,281	62,760	9,161	105,202
1960-61 ..	174	2,784	183	26,647	52,242	9,574	88,463
1961-62 ..	201	3,140	232	30,061	55,390	11,558	97,009
1962-63 ..	254	3,467	235	36,420	58,919	11,810	107,149
1963-64 ..	279	2,996	214	39,759	52,864	11,163	103,786
1964-65 ..	275	3,100	241	37,268	55,392	12,656	105,316
1965-66 ..	277	3,474	298	36,513	60,738	15,223	112,474
1966-67 ..	265	3,358	316	38,754	62,476	15,947	117,177

Average market prices of some of the principal classes of livestock are set out below. Generally prices fluctuate considerably from year to year, but for the beef lines a definite upward trend is evident over the past five years.

Livestock, Average Prices at Adelaide Market

Class of Stock	1963	1964	1965	1966	1967
	Dollars				
Fat cattle:					
Bullocks and steers ;					
Prime, medium ..	104.65	121.34	129.71	139.35	152.02
Good	90.00	104.35	117.08	122.47	134.49
Cows;					
Prime, medium ..	85.67	100.51	120.50	136.80	128.29
Good	71.71	84.22	104.29	116.89	109.95
Calves;					
Prime vealers ...	44.51	49.61	51.12	60.96	46.16
Good	31.04	37.92	35.06	44.24	27.30
Fat sheep:					
Merino wether;					
Prime	8.07	9.61	9.25	9.84	8.76
Medium	6.30	8.02	7.89	8.31	7.64
Lambs;					
Prime, medium ..	7.09	8.22	9.24	8.44	8.51
Good	6.18	7.28	8.01	7.61	7.40
Pigs:					
Choppers	84.77	78.12	66.45	64.02	75.68
Baconers	39.17	41.61	37.73	36.67	44.40
Porkers	21.97	22.54	19.37	19.98	23.28

The Australian Meat Board controls the export of meat, its sale and distribution overseas, and advises on matters relating to quality and grading of meat for export. The trading powers of the Board enable it to purchase and sell meat in its own right for the purpose of developing existing markets or creating new markets where there are special problems or circumstances which preclude the effective participation of private traders.

Finance for the Board's operations is derived from a levy imposed under the *Livestock Slaughtering Levy Act* 1964-1965. The levy is payable on the slaughter of all cattle (over 200 lb dressed weight), sheep and lambs for human consumption.

THE WINE INDUSTRY OF SOUTH AUSTRALIA

The Australian wine industry is not large by world standards; average production of wine in Australia for the five years 1962-63 to 1966-67 was 36 million gallons per year while total world production was estimated at 5,852 million gallons per year. In comparison with the world's two largest producers, Italy and France, which had an estimated production of 1,372 million gallons per year (23.4 per cent of world production) and 1,365 million gallons per year (23.3 per cent) respectively, Australia produced only 0.6 per cent. Other major producing countries include Spain, Algeria, Portugal and the United States, producing 9.9 per cent, 4.9 per cent, 4.8 per cent and 4.6 per cent of estimated world production respectively.

Though small in comparison with these countries, the wine industry is nevertheless an important one in Australia, especially in South Australia where approximately 42 per cent of the Australian vineyard area is located. In recent years South Australia has produced 70 per cent of Australia's wine, 85 per cent of brandy, and 16 per cent of dried fruit. The remaining mainland States range from New South Wales with approximately 7.8 million gallons (19.1 per cent) of Australian wine production in 1966-67 to Queensland, the smallest wine producer, with about 37,000 gallons (nearly 0.1 per cent).

Production of Wine ^(a), States of Australia

Year	New South Wales	Victoria	Queens- land	South Australia	Western Australia	Australia
'000 Gallons						
1962-63	5,858	2,433	28	20,785	789	29,893
1963-64	6,030	3,705	33	27,102	666	37,536
1964-65	6,404	3,458	24	28,022	613	38,520
1965-66	6,439	2,982	24	23,884	627	33,956
1966-67 (p)	7,893	3,368	37	29,324	705	41,337

(a) Net factory and farm production of beverage and distillation wine excluding the liquid gallanage of spirits added in wine fortifying.

(p) Preliminary.

Brandy Production, South Australia and Australia

Year	South Australia	Australia
Proof Gallons		
1962-63	994,420	1,128,997
1963-64	1,052,850	1,219,968
1964-65	1,183,351	1,400,100
1965-66	1,167,309	1,371,217
1966-67 (p)	650,618	789,971

(p) Preliminary.

HISTORY

The history of the Australian wine industry is as old as the settlement of Australia. When Captain Arthur Phillip arrived at Port Jackson with the First Fleet in 1788, he carried in his ships not only new settlers but also large quantities of livestock and plants for the new settlement. It is little known that among the plants were some vine cuttings which were destined to become the first grape vines grown in Australia and from which would come the first vine-

Pruning at
Coonawarra.
In vineyards the
pruning is done when
all the leaves have
fallen in May, June
or July.



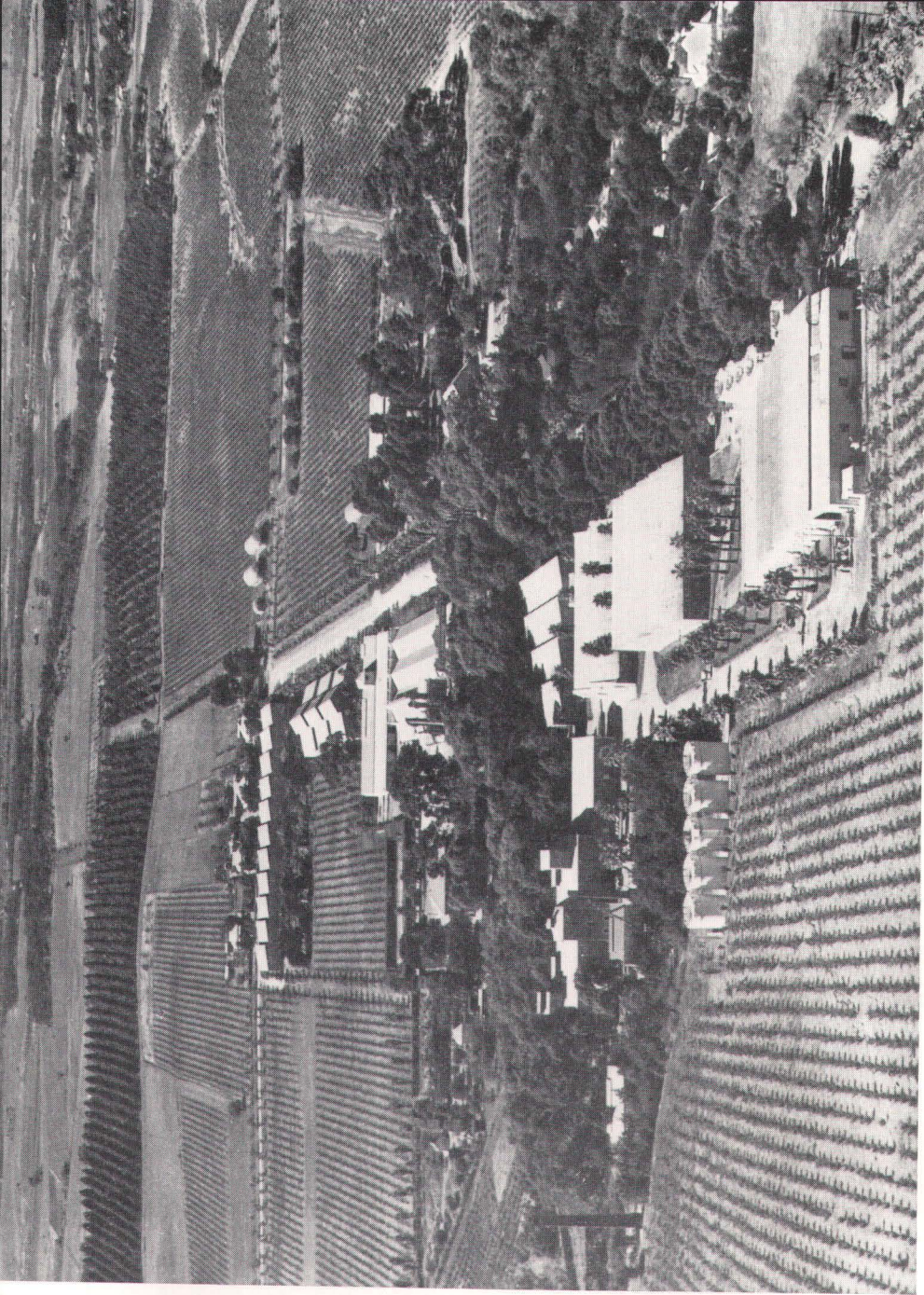
S. Wynn & Co. Pty Ltd

Vines are sprayed to control pests and diseases.

E. W. Boehm

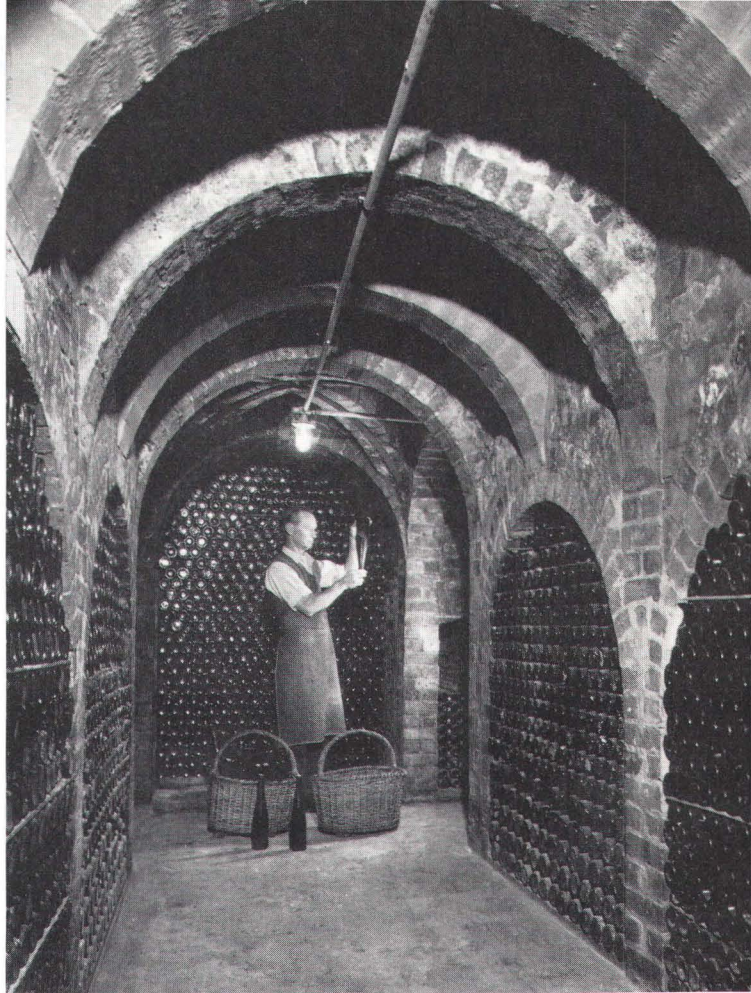


A winery set amid vineyards
at Seppeltsfield.



Wine stored in bottles.

Australian Wine Board



Wine stored in casks—large and small.

S. Wynn & Co. Pty Ltd





The craft of the cooper still survives to make casks for wine and brandy.

Australian Wine Board

Wine is exported to Canada in these steel 44 gallon drums—each contains a one-piece plastic inner drum.

Rheem Australia Pty Ltd



yards and wine. Packed carefully in moist sand, these cuttings, from the grapevines of Rio de Janeiro and the Cape of Good Hope, had been transported many thousands of miles to a land whose earth had never nourished a grape. From these few grape vines, limited both in number and variety, a start was made to propagate young plants from the cuttings obtained by pruning after it was established that the vines would grow in their new environment.

In the course of time however, it was found that the original site at Farm Cove presented unforeseen difficulties; climatic conditions proved to be too harsh and the humidity was conducive to the development of fungoid diseases. The conditions of the vines did not permit the fruit to ripen satisfactorily and attempts to make such fruit into wine were not crowned with conspicuous success. Later, as the colony became more settled and the surrounding country was explored, more suitable land was found where climatic conditions were more favourable not only to vine-growing but also to the extension of other agricultural and horticultural pursuits. In 1791, three years after settlement, Governor Phillip planted three acres of vines at Parramatta. The results of this experiment were promising and throughout the 1790s development of vineyards went on with varying success and by the opening years of the nineteenth century considerable quantities of wine were being produced.

The honour for establishing the first commercial vineyard must be bestowed on Captain John Macarthur. Historically, the names of Macarthur and merino sheep are synonymous and consequently his successes in vine-growing have been overshadowed by his greater success with sheep. However, as well as breeding sheep Macarthur also made some large scale plantings of vineyards on his 5,000 acre property at Camden Park about thirty miles from Sydney. Although plantings were made as early as about 1806 it was not until 1820, when the main vineyard was shifted to a more suitable site on the slopes of the Nepean River, that wine-making became a practicable business and by 1827 Macarthur's vintage totalled approximately 20,000 gallons. Within the next thirty years the area of vineyards in New South Wales increased to 760 acres, most of which were in the Hunter River Valley where an enthusiastic young Scottish viticulturalist, James Busby, planted a vineyard in 1830 which flourished in the fertile soil and from which surplus cuttings were distributed to intending planters.

By 1834 Australia's wine industry had begun to spread far beyond its birthplace. Plantings which were made at a number of locations during the following twenty years firmly established the wine industry in Victoria. During the 1840s many vineyards were established around Bendigo and Geelong but the gold strikes in 1851 attracted labour away from the vineyards of Bendigo and in 1875 phylloxera, a severe vine disease, virtually wiped out the vines at Geelong. At Rutherglen vines were planted in the early 1850s and by 1860 the district led the rest of Victoria in wine production.

Western Australia's wine industry began in 1840 when vineyards were planted in the fertile valley of the Swan River about thirty miles from Perth. In 1845 these vineyards were extended and the production of wine became an established industry. However, the first serious attempt to make wine on a commercial basis dated from 1859 when a winery was established on a property in the middle of the Swan Valley. This winery is still in active operation today.

In Queensland the industry was founded in 1866 on the western slopes of the Darling Downs about two miles from the town of Roma. It took almost two months for a bullock team to haul a load, which included 1,000 vine cuttings, from Toowoomba, 200 miles away but only 300 cuttings survived the journey.

Fortunately, these cuttings flourished in the sandy loam of the property and today the vineyards produce wine from some of the original vines, which, after a century of growth, are still heavy bearers.

Although New South Wales and Victoria gained an early lead in wine production, the first position among Australia's wine producing States has long been held by South Australia. In no other State has the making of wine become such a familiar and integral part of community life. Several of the early vineyards were planted within a few miles of Adelaide and today a few still remain within the suburban area.

Trial plantings of vines were made soon after the arrival of the first European settlers in 1836. Some of these were no doubt intended for fresh fruit production but some owners were also interested in testing the potential for wine.

John Reynell, who in 1838 obtained cuttings from Tasmania, planted them on his property about fourteen miles south of Adelaide where the township of Reynella now stands. The cellar used for the first South Australian vintage in the late 1830s was a hillside dug-out roofed over with earth. It is still used today for the storage of fine wines and brandies and is so well preserved that it is highly valued for its cool and uniform temperature. At about the same time Richard Hamilton planted vines at Glenelg from which the first wine was consumed in the early 1840s.

Although it is doubtful if these early plantings actually amounted to vineyards, they were soon extended and small commercial vineyards were established by John Reynell, Richard Hamilton, and other pioneers in the early 1840s with cuttings imported from New South Wales (including some cuttings from Macarthur's property at Camden Park), the Cape of Good Hope and Europe. An early impetus was given to the wine industry by the formation in 1840 of the 'Association for Introduction of Vines' with thirty subscribers and the arrival the following year of the *Elizabeth Moore* with 57,000 vine cuttings imported from Cape Town. Reynell built his first winery in 1845 and had his first commercial vintage the following year.

The growth of the early vineyards and the quality of the wines made from them were considered so promising that further planting followed in selected areas near Adelaide and also to the north and south of the young city. In 1844 Dr Rawson Penfold arrived in Adelaide with a number of vine cuttings which he planted at Magill about four miles east of the city; it is said that his object in bringing the cuttings was to grow grapes and make wine for the benefit of his patients. In 1853, Thomas Hardy began his wine-making enterprise at Thebarton only later to move to McLaren Vale.

The first Barossa vineyards were established before 1851 under such famous wine names as Gramp, Samuel Smith and Seppelt. In 1847 Johann Gramp planted vines at Rowland Flat in the hilly country at the foot of the Barossa ranges, built a cellar and made his first wine in 1850. At Angaston, Samuel Smith planted a vineyard and built a small cellar in 1849; to this he gave the name 'Yalumba', a name which is still associated with his descendants in the industry today. Joseph Seppelt planted his vineyard in 1851 and later built a cellar which was the fore-runner of one of the largest wineries in Australia.

North of Barossa are the Clare and Watervale districts which are topographically similar to the vineyard areas south of Adelaide and from which come some of Australia's most delicate white wines. Plantings were first made at Watervale in 1853 and at Sevenhill, near Clare, by the Jesuit Brothers in 1859. At about the same time the Bleasdale vineyard was started at Langhorne Creek south of Adelaide.

Coonawarra, noted for its red wines, is an isolated vine-growing area in the south-east of South Australia between Naracoorte and Mount Gambier and had its origin in the 'Coonawarra Fruit Colony' set up by a local land-owner, John Riddoch, who attracted migrants with the offer of 10 acre fruit-growing blocks. In 1891, Riddoch planted 128 acres of vines and built the first winery in the area. More recently, vineyards have been established at Padthaway about fifty miles north of Coonawarra.

The arrival in Australia in 1887 of two irrigationists from California, George and Ben Chaffey, was associated with a different and very significant development in South Australian viticulture. Brought to Australia by the Victorian Government to plan the irrigation settlement at Mildura, the Chaffey Brothers also became interested in Renmark and, by developing the first irrigation district there, laid the foundation for the mammoth fruit producing industry now established at numerous centres along the Murray River from the Victorian border to Cadell. This region, referred to as the Upper Murray, grows a large quantity of fruit, which includes over 60 per cent of the State's annual grape crop. Small areas of irrigated vineyards have recently been established at Nildottie and Bowhill on the Murray approximately fifty and seventy miles respectively down-stream from Cadell.

Originally grape plantings in the irrigated districts on the Murray were intended for the production of dried fruit. But a distillery, established at Renmark by Angoves in 1919 to process surplus grapes, was sufficiently successful to encourage fruit-growers to plant varieties of grapes which were ideal for making distillation wine but were not suitable for drying.

Following Angoves' lead, growers co-operatives established distilleries at Renmark, Berri, Waikerie and more recently, at Loxton; however they soon saw the opportunity to make beverage wines, particularly the sweet fortified styles. In more recent years the River wineries have turned their attention to unfortified table wines and with advances in technology and the establishment of special sections within the wineries to give the detailed attention required, they are now able to make table wines which have proved worthy competitors for the traditional makers in non-irrigated areas.

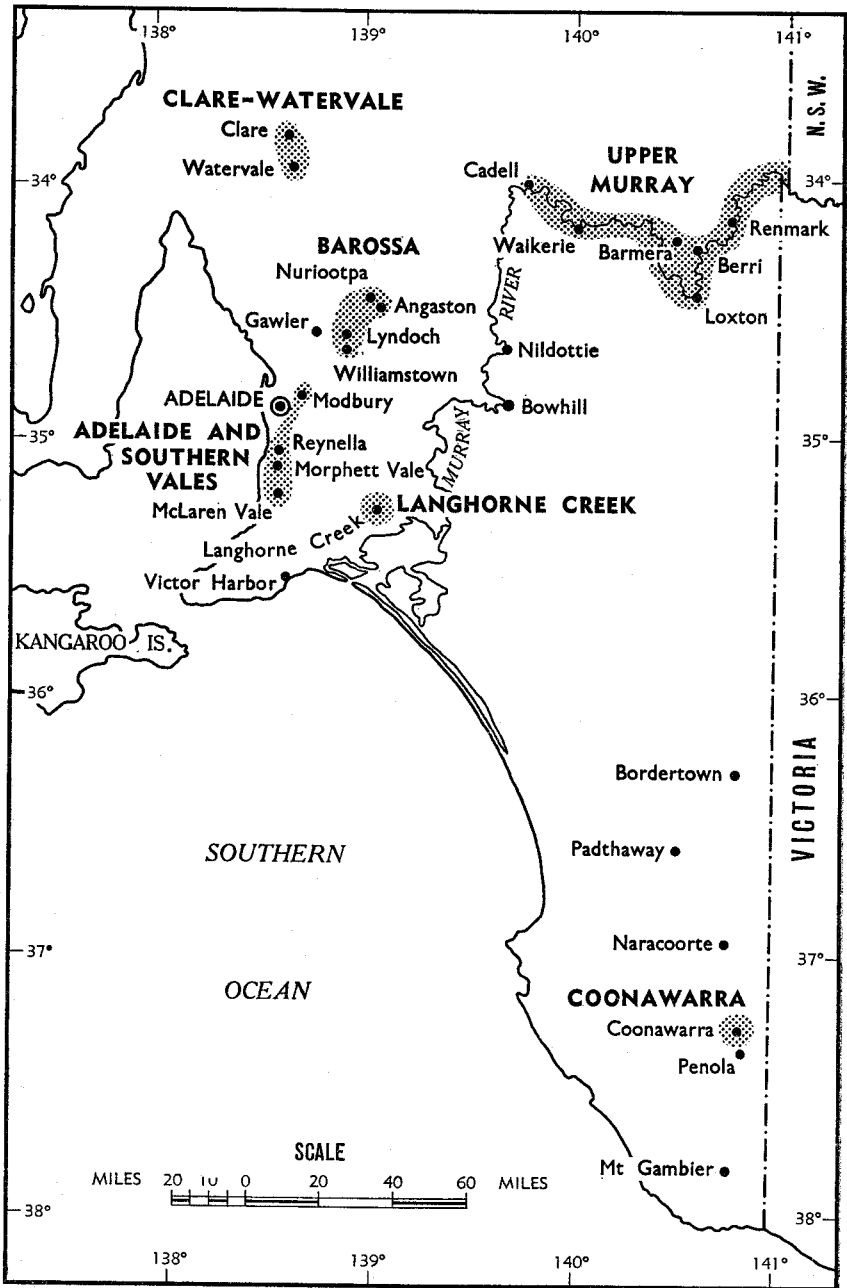
GRAPE GROWING DISTRICTS

The grape-growing districts of South Australia are subject to substantial variety in geographical location, climatic variations and soil conditions and can be divided into six easily recognisable regions (See map 10) ranging from the Clare-Watervale district in the north to the southern limit of the grape growing area at Coonawarra in the south-east of the State and bounded by the warm irrigated areas of the Murray to the east.

Supplementary irrigation is to be found in some portions of the so-called non-irrigated grape-growing districts, *e.g.* Langhorne Creek, but all the vineyards in these areas are mainly dependent on winter rainfall stored in the sub-soil by careful dry-farming methods to be used during the summer growing season of the vine—the non-irrigated districts are less uniform than the Upper Murray.

This diversity of areas, each with its own characteristics, produces grapes with subtle differences which ensure that the wines produced attain a character unique to South Australia which is highly regarded both in Australia and overseas.

PORTION OF SOUTH AUSTRALIA
GRAPE GROWING DISTRICTS



MAP 10

The Upper Murray

The irrigated districts, Renmark, Berri, Barmera, Loxton and Waikerie are in the warm, arid region of the Murray Valley where the annual average rainfall is only ten inches, and horticulture is wholly dependent on irrigation from the River Murray. The area is a plain, relieved only by low sandhills and the channel of the river. The soils are alkaline and mainly sandy, generally high in salt content and underlain by a layer of accumulated lime. Tree crops are usually grown on the deeper sands while shallower clay and sandy textured soils are used for vines.

Water lifted from 50 to 100 feet from the river was originally distributed through open channels and applied to the plantings by furrows, but installations in the last fifteen years have generally used pressure lines containing appropriate outlets for distribution into furrows for the irrigation of vines. Over-head sprinklers run from these pressure lines and are normally confined to tree plantings although in recent years they have become increasingly common for vines as well. The latest trend is to use low-throw sprinklers for tree crops to avoid salt uptake from the water through the leaves, but it is difficult to adopt this method of water application to the close plantings necessary in vineyards.

The Barossa

The Barossa district loosely includes the Barossa Hills and surrounding countryside, as well as the Barossa Valley proper. In this picturesque valley has developed Australia's largest wine area; extending for a distance of about twenty miles in a north-easterly direction from Williamstown through Lyndoch to Nuriootpa and Angaston, its vineyards flourish on the slopes of and in the broad well-drained valley and are protected by steep hills thick with trees. This is not agriculturally 'rich' country; much of the land is plain and sandy, but a good underlying subsoil gives the vines solid foundations for their roots which, combined with adequate rainfall and an ideal climate, is enough to ensure that the crops yield some of the finest wines bottled in Australia.

East of the Barossa Valley lie the Barossa Hills in which are planted a number of vineyards between Angaston, Eden Valley and Springton. So far as grape-growing is concerned the Barossa Hills, as distinct from the Valley proper, constitute an entirely different district. The elevation is around 1,500 feet; the soils are podzols characterised by an acid reaction and a gritty topsoil separated sharply from a clay subsoil; the temperatures are slightly lower and vines here ripen about three weeks later than in the Valley.

By comparison the elevation of the Valley is somewhat lower, being around 900 feet. The soils are varied in type but differ generally from the Hills in having a neutral surface underlain by alkaline subsoils, often with free lime present.

Clare-Watervale

In the past decade there has been a vigorous development of vine-growing in this district, seventy-five to eighty miles north of Adelaide.

The soils used for vine-growing are mainly red-brown earths, a soil type which is characterised by a sandy-loam to loam surface, slightly acid or neutral in reactions, overlying an alkaline clay subsoil usually containing some free lime. The rainfall at Clare averages 24 inches per annum and the elevation is 1,300 feet. Grapes in the district ripen later than in the Barossa Valley and at about the same time as in the Barossa Hills.

Adelaide and Southern Vales

Included in this area are McLaren Vale, McLaren Flat, Reynella and Morphett Vale south of Adelaide as well as the vineyards along the foothills east of Adelaide. These plantings are cultivated in a variety of soils but the red-brown earth is the most common. In the Southern Vales there are some leached sands and, in places, soils containing lateritic gravel; but in general lime is commonly found in the subsoils although the surface may be neutral or slightly acid. The rainfall in these districts is about 21 inches per annum and the elevation is below 500 feet.

Langhorne Creek

Forty miles south-east of Adelaide is a vine area distinctly different in character from nearby districts. This is Langhorne Creek where 650 acres of vines are grown under a system of winter flood irrigation which is used to supplement the inadequate rainfall of 14 inches.

The red-brown earth of the soil type which is dominant throughout the non-irrigated areas occurs again at Langhorne Creek although it is modified by alluvial deposits along the Bremer River.

Coonawarra

In the South East, 250 miles from Adelaide and near the southern limit of the region in which grapes can be grown and ripened, is the small district of Coonawarra. Here the grapes ripen slowly and late, and the apparent association between a slow rate of ripening and wine-making quality is evident in this district which is noted for its red wines.

The soil at Coonawarra belongs to the type called terra rossa; it is a red friable loam 6 to 18 inches deep over a layer of limestone with a hard capping. However, the extent of this soil type is quite limited and almost all of it has now been planted. Although Coonawarra's rainfall averages about 25 inches, the grapes are improved by supplementary irrigation from a copious supply of shallow underground water.

VINEYARDS

The proprietors of vineyards in South Australia fall mainly into four categories. (1) The proprietary companies which between them own a substantial proportion of the State's wine-grape plantings. The largest of them cultivate from 400 to 900 acres each, represented in various properties, some of which are on the Murray. (2) Fruit-growers in irrigated areas who normally have 20 to 30 acres of fruit in which grapes are included in various proportions with citrus, stone-fruits, pears and others. Approximately 40 per cent of the grapes grown on properties of this type are dried, the remainder is used for wine or spirit apart from an insignificant proportion which is used for table grapes. (3) Grape-growers in the non-irrigated areas who may also grow another crop but whose main enterprise is grape production. Normal vineyard size in this category is about 30 acres. (4) Sideline producers who grow up to 10 acres and sometimes more, in addition to some other enterprise which is of greater importance to them. The other enterprise is most often dairying or sheep grazing but in certain cases, particularly in the Barossa, the proprietor may have regular employment in some other business, often in a winery.

Land in the non-irrigated districts is normally held under a freehold title. On the Murray, about half the fruit-growing area is within one or other of the irrigation settlements; each irrigation settlement is a planned group of holdings with a comprehensive water supply administered by the Department of Lands

and land is held under irrigation perpetual lease. Outside these settlements, but still on the River Murray, there are a number of private freehold properties with their own pump and water reticulation system. Most of these are privately owned and managed as separate units, but several are schemes developed privately and divided into a number of individual blocks under individual management.

Plantings

After only a few years experience, grape-growers found that the close plantings used in Europe were not necessary in Australia. Planting distances were opened out and have been standardised at 11 or 12 feet between rows and usually 7 feet between vines in the row, making 600 vines per acre compared with 2,000 or more in Europe. Vines planted before 1890 were trained as bushes but the vigorous growth obtained in the new irrigation areas after 1887 made some support necessary and wire trellises came into use. Trellises were subsequently adopted in all areas and although bush vines are still seen growing, particularly in the Barossa, the Department of Agriculture recommends that all future plantings be trained on trellises. The unqualified success in recent years of vines planted in rows which follow the contours has led the Department of Agriculture to recommend further that contour plantings be considered for all new plantings in non-irrigated areas.

Area of Vineyards, South Australia

Particulars	1964-65		1965-66		1966-67	
	Bearing	Not Bearing	Bearing	Not Bearing	Bearing	Not Bearing
	Acres					
Vines:						
Wine grapes	40,155	5,047	40,713	4,714	41,496	3,885
Table grapes	207	37	258	41	199	24
Drying grapes	13,024	387	12,563	442	11,037	439

Yields

District averages in the irrigated areas are seven to eight tons per acre although individual vineyard yields of fifteen, and even twenty tons per acre are not uncommon. In the non-irrigated districts the average is one and a half to two tons per acre with individual vineyards producing eight or ten tons in favourable years. About half of the State's wine-grapes are sold by private treaty to proprietary wine-makers at prices, according to variety, which were until 1965, fixed by mutual agreement between representatives of the grape-growers and the wine-makers. Agreement could not be reached for the 1966 vintage and as a result prices were brought under price-fixing legislation and are now determined by the Government Prices Commissioner.

About one-third of the State's wine-grape crop is received by the co-operative wineries. Nearly all of this is grown by members who receive a down payment on each ton, followed by further payments over a period of up to five years according to realisation made on the product. Most of the wine, brandy and spirit made by co-operatives is sold in bulk to proprietary wineries.

Production of Grapes, South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
	Tons				
Grapes (a):					
For wine	116,081	148,828	158,340	129,855	163,780
For table	1,078	969	1,167	1,210	1,027
For drying	47,649	61,922	74,790	52,737	60,609

(a) Growers' intentions as stated at 31 March.

Grape Varieties

The most common grape varieties in South Australia are those which can be used for dried fruit as well as wine or spirit production. About 60,000 tons of grapes, freshweight, or a little more than a quarter of the State's total crop is dried to produce sultanas, currants and raisins. Production of sultanas is greatest with crops varying around 50,000 tons per year, representing about a quarter of all the grapes grown in the State. This is produced on slightly less than 9,000 acres of bearing sultanas; in 1967 there was a total of 9,160 acres of sultanas, but this included 225 acres of young vines not yet bearing. This is slightly less than the 9,965 acres of the main wine-grape variety, Grenache, but since three-quarters of the Grenache is grown in non-irrigated districts where yields are lower, the total crop is only half that of the sultana.

Another leading variety is Muscat Gordo Blanco, or more commonly Gordo in the River districts and often called Muscatel when sold as a table grape. Although known as a drying variety, more than 90 per cent of it is crushed for wine or spirit production, and the total tonnage used by the wine industry is greater than any other variety, including the leading wine-grape Grenache.

Riesling and Cabernet Sauvignon (3,793 and 876 acres respectively in 1967) while not leading in acreage, are most important in white and red table wine production because of their superior quality.

Principal Varieties of Vines, South Australia

Variety	December 1957 (a)	December 1964 (a)	December 1965 (a)	March 1967
	Acres			
Sultana	10,009	9,515	9,320	9,160
Muscat Gordo Blanco	6,442	5,978	5,913	5,461
Currants	6,207	4,312	3,992	3,563
Grenache	9,462	9,796	10,039	9,965
Shiraz	5,843	5,494	5,586	5,661
Doradillo	4,605	4,398	4,624	4,554
Pedro Ximinez	3,398	4,521	4,573	4,331
Pedro False	1,627	3,085	3,164	3,793
Semillon				
Rhine Riesling				
Clare Riesling				
Mataro	3,901	3,185	3,221	2,757
Other	6,229	7,452	7,784	7,835
Total	57,723	57,736	58,216	57,080

(a) Figures compiled by the Phylloxera Board of South Australia.

Table Grapes

As grapes grow so easily in Adelaide and a number of the other large centres and because many families are able to have a home garden, home production of fresh grapes satisfies most of the demand. The one thousand tons of table grapes sold annually in South Australia is less than one per cent of the total crop.

The Phylloxera Board

Representatives from grape-growers, wine-makers and the Government constitute the Phylloxera Board which was established by the Phylloxera Act in 1899. The Board is responsible for the protection of South Australian viticulture against invasion by phylloxera, and secondly, for the reconstruction of vineyards if phylloxera should appear. Reconstruction would consist of removing vines growing on their own roots, as they do at present, and replanting with the same varieties, but grafted onto phylloxera-resistant rootstocks.

At the time that phylloxera, a lethal root-feeding insect from North America was sweeping through the viticultural districts of Europe, South Australia placed a complete embargo on the importation of any vine material, a measure which has been successful in keeping this disease out of the State. This embargo remained from 1894 until 1948 when a change in legislation under the Phylloxera Act allowed the entry, under strictly controlled conditions, of rootstock varieties. A further amendment to this Act in 1964 permits the limited introduction of wine-grapes, as distinct from rootstocks, and in the last three years a number of classic varieties which were not in South Australia because of quarantine restrictions have been introduced by the Phylloxera Board. However, vine introduction, other than through this special channel, is still strictly forbidden and infringement of this law carries a severe penalty.

Pests and Diseases

The State is fortunately in a position where it is relatively free of major troubles from any pest or disease. Several, like phylloxera, have never gained entry, and another, downy mildew, is not serious here because the dry summers do not favour its development. The only widespread disease for which routine treatment is necessary, is oidium, or powdery mildew—sulphur, applied once or twice during the spring is an effective control. The main problem of South Australian viticulturists is not disease, but water, either the lack of it in non-irrigated areas, or its association with salting in irrigated areas.

ROYAL COMMISSION ON GRAPE GROWING

Following good crops in 1962, 1964 and 1965, a surplus developed in certain wine-grape varieties in South Australia and some of the 1964 and 1965 crops remained unsold. This situation motivated the Government in 1965 to appoint a Royal Commission to enquire into all aspects of the grape-growing industry, the associated problems and other incidental matters including:

1. The costs of production of the various types of grape in the various districts in the State of South Australia.
2. The factors (including availability of varieties and demand) upon which the allocation of grapes for drying and for production is based.
3. The factors, including the costs of wine-making upon which agreements between grape-growers and wine-makers should be based, so as to ensure a fair and proper return to all parties to such agreements.
4. The effect upon existing grape-growers and in particular upon settlers under the War Service Land Settlement Agreement Act, 1945, of further planting of wine grapes

and thereafter to report and make recommendations on what action might be taken towards solution of the problems associated with the grape-growing industry.

The Royal Commission found that the problems facing the grape-growing industry in South Australia were basically those of supply and demand. Due to good seasons and additional plantings supply had increased and, although demand for wine and brandy had improved, it had not been sufficient to keep pace with the increasing grape production. The problem was accentuated by an over-supply of some varieties and a shortage of others. Consequently one of the recommendations of the Commission was that the Government should appoint a Grape Industry Advisory Committee to study trends and provide guidance in the development of the industry. Since its inception in 1966 the Committee has made an analysis of grape variety requirements, based on statistics made available for the purpose by the Commonwealth Bureau of Census and Statistics, and has made recommendations on varieties needed in future plantings.

Other recommendations, also aimed at increasing demand, included the seeking of additional assistance from the Commonwealth Government for promotion expenditure, a review of the retail prices of wine and brandy by the Prices Commissioner, and a review of licensing provisions with a view to relaxation generally on the restriction of selling outlets.

WINE-MAKING

Vintage in Australia lasts from around the middle of February until early May. The warm dry air during the ripening means greater sugar concentration with low natural acidity enabling many robust and full-bodied wines to be produced. Although the greater proportion of vineyards is located in the warm low regions where the heavier wines are made there are many in the higher cooler areas where delicate red and white table wines are produced. The climate, the richness of the grapes and the care and modern skill with which they are processed combine to bring forth wines of exceptional quality. The making of quality Australian wine is the work of scientifically trained men who do not produce their wine by chance, but who see that it is properly matured, who give it repeated tests, and who watch its development very carefully. It is said, both in Australia and by wine-makers from other countries, that more science goes into the making of Australian wines than those of any other country.

When the grapes are ripe (the time of ripeness depends on the district and weather conditions in that district) they are gathered from the vines and taken to the wineries where they are tested for their baume degree or sugar content; on average one degree of baume equals one per cent absolute alcohol, or 1.75 per cent proof spirit, so that the higher the degree of baume in a grape the higher is its commercial value. Under the most favourable conditions, grapes can have up to 18 degrees of baume, though this is exceptional.

At the wineries, the grapes, which are taken from the vineyards in loads of up to twelve tons, are fed into a crusher which removes the berries from the stalks, crushes the berries and ejects the stripped stalk at one end of the machine. Modern crushing machines can handle up to fifty tons of grapes in an hour.

The 'must' or grape juice which results from this operation is usually received into a concrete tank and is immediately transferred to fermenting tanks of about 1,000 to 3,000 gallons capacity. This 'must' represents between 60 and 70 per cent of the total crush, depending mainly on the pressure applied; the remaining 30 or 40 per cent is the 'marc' or 'pomace'—skins, pips, stalks and other insoluble matter. Generally speaking, white wines, such as hock, riesling, chablis, sauternes, champagne and sherries are made from white grapes, and the red wines, such as burgundy, claret and port from red grapes although a white wine can be made from a red grape if the juice is removed promptly

from the skins after the grapes are crushed. The process in the fermenting cellar varies according to the type of wine which is being made; with light table wines like hock, the juice is immediately separated from the skins; in making the red wines, the skins and seeds are retained with the juice for some time to allow the juice to dissolve tannin and colouring matter.

After crushing, the residues begin to ferment naturally through the action of wild yeasts which are found on the skins of ripe grapes, and it is because of the presence of this yeast that grape juice may become wine simply by fermentation. However, some of the natural yeasts are undesirable for wine-making and the wine-maker adds specially selected yeast to commence fermentation of the must. The undesirable yeasts are suppressed by the addition to the must of minute quantities of sulphur. The selected yeasts are acclimatised to sulphur and consequently remain active.

Wines are normally classified in two main groups, namely, table or dry wines, and dessert or fortified wines. In making a dry wine, fermentation is allowed to continue until, through the action of the yeast, most of the grape sugar is converted into alcohol and carbon dioxide, which is given off. For the production of fortified wine, grape spirit (alcohol) is added to the fermenting juice to cause fermentation to cease while there is still a considerable amount of grape sugar unfermented. Yeast cells will not normally ferment in the presence of more than about 16 per cent of alcohol and the resultant wine, therefore, retains natural sweetness to the extent required by the wine-maker. After fermentation has ceased or, in respect of fortified wines, has been stopped, the wine remains in the tank for a few weeks to enable particles of suspended matter, such as dead yeast cells, to settle on the bottom of the tank. The clear wine is then pumped off the sediment into a clean tank by a process known as racking. The sediment, called lees, is later subjected to a distillation process to recover the grape spirit it contains. During the first six months of the life of a wine, it is usually racked three or more times.

When the racking operations have been completed, the wine is further treated by a fining process. This is the process of clearing wines by colloidal agents which disperse in the wine and then combine with the tannin to form insoluble tannates; gelatine, isinglass and a colloidal clay, known as bentonite, are three materials in common use. These substances form small flakes in the wine which collect further suspended matter and deposit it on the floor of the tank. The finings remain in the wine for two or three weeks when the wine is once more pumped off the sediment into another tank. This fining process leaves the wine quite bright, but to make sure it is perfectly clear and brilliant before it is stored for maturing, the wine is passed through a filter where even the most minute particles are removed.

Wines are generally matured in oak casks or vats. The lighter, more delicate types of wine are stored in the coolest parts of the cellars, while the fortified wines mature better and more rapidly if stored in warm parts. According to the degree of maturity required and to the type of wine (for instance, red wines are matured longer than white wines), wines are retained in wood storage from a few months to ten years. The wines are then bottled after a final fining or filtration. Many wines will continue to improve for some years in bottles, although there are white table wines that are at their best when only eighteen months old.

Wine contains a quantity of natural alcohol which may be separated from its other constituents by distillation. Two types of spirit are produced; brandy, and rectified spirit, which is used for fortifying wine. Brandy, generally, is distilled at a lower strength than rectified spirit, and therefore retains many

substances which are responsible for its particular character. It is a requirement of the Australian Government that brandy be matured in wood for at least two years before marketing. It is considered that this is the minimum period in which brandy can be expected to attain an acceptable maturity and mellowness.

Finally, by-products such as cream of tartar and grape-seed oil are recovered from the residue of the grapes.

Wineries

Wine is made in over seventy wineries in South Australia. Seven of these are owned by grower co-operatives and the remainder belong to proprietary companies or to individual owners. The wineries are distributed throughout all the vine-growing districts of the State and vary in size from quite small concerns, which handle less than ten tons of grapes a year, to very large establishments processing many thousands of tons. Generally these larger wineries are very well equipped by world standards with modern machinery, up-to-date control laboratories, and highly trained technical staff.

The wine-making firms all own extensive vineyards and most of the wineries are located on or closely adjacent to vineyard properties. Nevertheless, very few wine-makers rely entirely on their own vineyards for grapes. The small winery processing only the grapes from one property, which is so common in some countries, is rather the exception in South Australia where the majority of wine-makers purchase a substantial proportion of the grapes they require from other growers.

The minimum prices to be paid for grapes delivered to wineries are determined and declared each year by the South Australian Government Prices Commissioner. These prices differ for different varieties of grapes and it is usual for the grapes from non-irrigated districts to command higher prices than the same varieties grown in the irrigated districts.

Wine Districts

The Adelaide plains and foothills produce a wide variety of wines including both dessert wines and table wines of high quality. The districts to the south of Adelaide, including Reynella, Morphett Vale, McLaren Vale and Langhorne Creek are particularly noted for red table wines (clarets and burgundies) which are made chiefly from the variety Shiraz with some Cabernet Sauvignon. Very good ports are also produced from Shiraz and Grenache, and sherries from Pedro Ximenez and Palomino. Small but significant amounts of outstanding white table wine are also produced from Riesling grapes grown in this area.

Coonawarra in the South East has achieved an enviable reputation for clarets and produces this type almost exclusively from Shiraz and Cabernet Sauvignon. Some recent plantings of Riesling and Clare Riesling will make possible the production of white table wines in this district.

The country around Lyndoch, Tanunda, Nuriootpa and Angaston in the Barossa Valley has been noted particularly for dessert wines, sherries and brandies. Shiraz, Grenache and Mataro are the most widely planted black varieties in this district, with Pedro Ximenez, Palomino, White Hermitage and Doradillo prominent as white varieties for dessert wines and sherries. Some excellent table wines are also produced in this region, particularly from vineyards in the hilly country to the east of the Barossa Valley and in the vicinity of Eden Valley and Springton. The grapes of the varieties Riesling, Clare Riesling, and Semillon produce the highest quality white table wines while Shiraz is the most useful variety for reds.

The Clare-Watervale district has long enjoyed a reputation for high quality white table wines made chiefly from Riesling and Clare Riesling. However, this district also produces some very good red table wines mainly from Shiraz and some excellent sherries from Pedro Ximenez and other types.

The hot climate of the Murray Valley has generally been considered to be more suitable for the production of sweet dessert wines than for delicate table wines. Here, large quantities of sweet sherry, port, and muscat are made as well as a great deal of brandy and fortifying spirit to be used in the production of dessert wines. It has been demonstrated however, that these areas are also capable of producing table wines of very acceptable quality. The gradual change in Australian wine drinking habits in recent years has resulted in an increased demand for table wines and this in turn has stimulated interest in the production of these wines in all districts, even in the warmer areas which had been considered as the traditional homes of dessert wine and spirit production in Australia. This change in the style of wines produced in the warmer areas has been made possible by new plantings of vines and by improved methods of wine-making.

Wine and Spirit Production, South Australia

Type	1962-63	1963-64	1964-65	1965-66	1966-67
	'000 Gallons				
Beverage wine:					
Fortified;					
Dry white	587	881	1,194	805	1,174
Sweet white	3,820	4,490	4,795	4,177	5,152
Sweet red	1,162	1,934	1,534	1,469	1,688
Unfortified;					
Red	1,588	2,409	2,696	2,369	3,493
White, including sauternes ..	2,253	2,791	3,322	3,582	4,534
Distillation wine	12,102	15,457	15,442	12,264	14,336
Total wine (a)	20,785	27,102	28,022	23,884	29,324
Spirits:					
Brandy	994	1,053	1,183	1,167	651
Grape spirit	1,759	2,130	2,151	1,968	2,435
Total spirit	2,753	3,183	3,334	3,135	3,086

(a) Excludes grape spirit added.

Blending

Although many excellent wines are made without recourse to blending, that is to say, from grapes of a single variety grown in one vineyard, such a procedure does not always make the best use of the grapes available nor result in the best wines. Quite often the composition of grapes falls somewhat short of the optimum for wine-making because of deficiencies or excesses of certain components. Although the grapes and wines of different varieties, districts, and seasons differ in composition, it is often possible to select for blending together, wines which are complementary in composition. The object of blending is to choose and assemble together complementary wines in such proportions that the resulting wine is superior to any of the components of the blend.

Recent Developments

The notable increase in the production of table wines which has occurred in recent years has been made possible by several factors. These have included new plantings which have increased the production of grapes particularly suited to table wine production, and improved winery equipment and wine-making techniques. Much closer control of the whole process of wine-making is now possible and this is particularly important for the production of high quality table wines. It is now common practice for the wine-maker to carry out his fermentation with selected yeasts at controlled temperatures and to exercise rather close control over the quality of his product by means of the winery laboratory. Many of the larger wineries are now provided with modern laboratories which are usually well equipped and staffed. The function of such laboratories is to control the various stages and operations in the making and maturation of wines so that the processes and treatments used are co-ordinated and integrated. Wine-making has become a highly technical industry and the part played by the laboratory in quality control is becoming increasingly important.

MARKETING

The Australian Wine Board was established in 1929 under the Wine Overseas Marketing Act. Originally known as the Wine Overseas Marketing Board its main function was to control the export of wine but later the Board was given its present title and acquired the power to promote the sale and improve the quality of Australian wine and brandy in Australia and overseas. The office of the Board is in Adelaide. Although the Wine Board operates under a Commonwealth Act, it is completely autonomous, having no source of income other than that obtained by a levy on wine grapes processed by all wineries and distilleries in Australia. The rate of levy on the 1968 vintage was \$1.50 per ton, which was the maximum allowable charge.

The Board, consisting of representatives from wineries and distilleries, grape-growers, and the Commonwealth Government, supervises the sale and distribution of Australian wine exported and recommends conditions under which export licences should be issued; it also engages in wine publicity and trade promotion activities both in Australia and overseas. In London the Board maintains an Australian Wine Centre, which is both a medium for promoting interest in Australian wines and brandy and also a retail outlet for the sale of these products.

By world standards Australian wines are recognised for their high quality, and Australia is in the fortunate position that it can produce all types of wines with only small variations from vintage to vintage. In export markets Australia is perhaps better known for its sweet wines which are marketed as sherries and ports, although in recent years Australian table wines have become better known overseas.

A recent problem confronting exporters of Australian wine has been that of nomenclature. Some European wine-makers claim the exclusive right to the use of names such as 'sherry', 'sauterne' and 'burgundy', since these names applied originally to wines of a specific region only. The view of the Australian wine industry is that such names have become generic through common usage over a long period of time. In Australia there are no set rules for wine nomenclature, and generic names are used fairly extensively in conjunction with Australian geographical names, grape varietal names and brand names derived from various sources. At present the British Government requires that the name of the



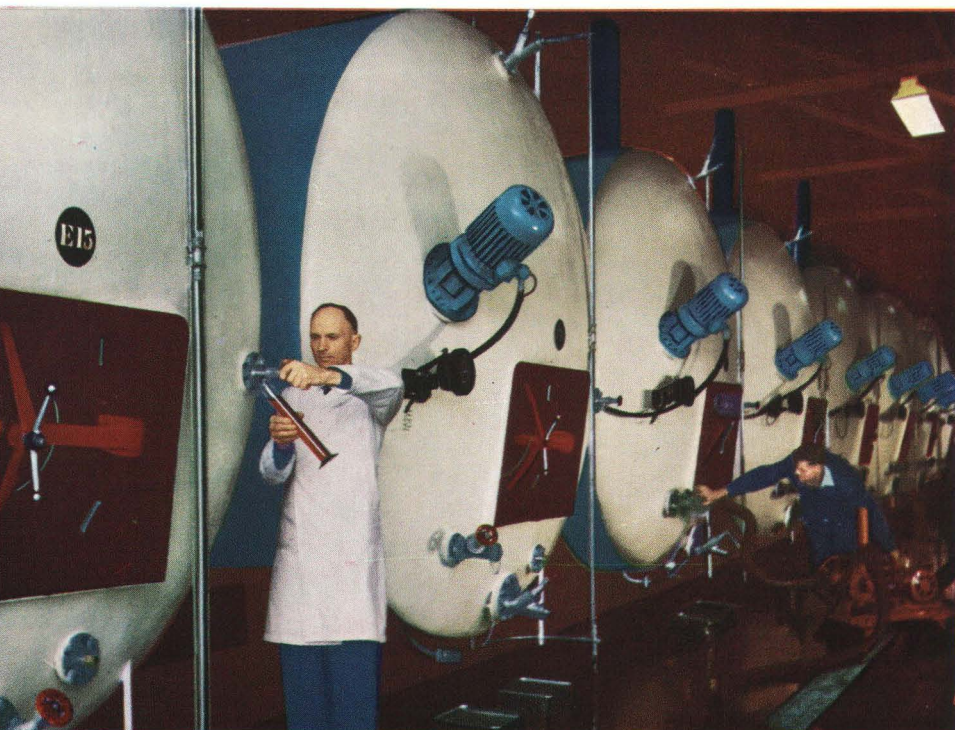
In this vineyard the grapes are ripe and ready for picking.

Australian Wine Board

A trailer load of freshly picked grapes arriving at a winery.

Australian Wine Board



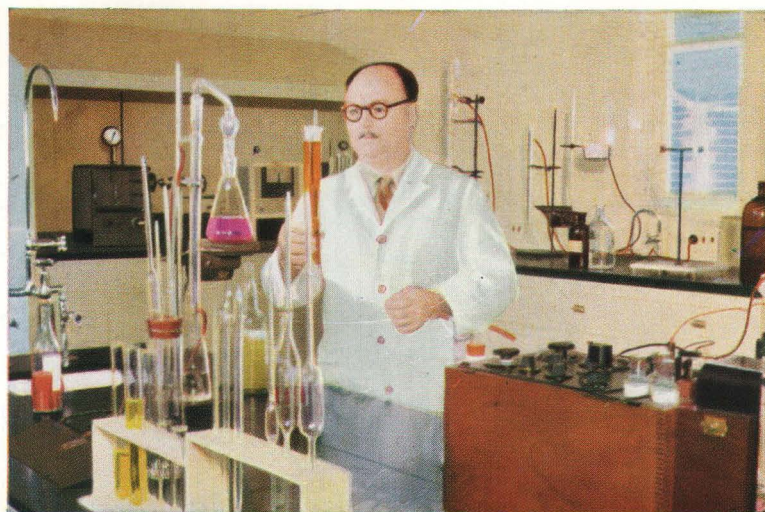


Australian Wine Board

A sample is taken of wine which is being fermented under pressure.

The winery laboratory enables the wine-maker to maintain a close control over the quality of his wine.

Australian Wine Board



country of origin be prominently displayed on the label immediately before the generic name. Thus, Australia's wines are marketed as 'Australian sherry', 'Australian port' and so on. An important ruling in this regard was made by the British High Court in July 1967 after Spanish sherry exporters had objected to the use of the name 'sherry' by other countries marketing in Britain. The ruling made was in favour of continuing the use of the name 'sherry' in Britain, all countries other than Spain being required to prefix this with the name of the country.

History

The first commercial shipment of Australian wine reached England in 1854. From that time there was a steady expansion of wine exports reaching an average of about 800,000 gallons per year around 1900. An Imperial Preference tariff for Empire-grown wines was granted by the British Government in 1925 and Australian wines profited by a 50 per cent preferential duty which enabled Australia to compete with the strongly entrenched European products. In 1927 more than four million gallons of wine were shipped from Australia and from then until 1939 the average was about three million gallons a year, most of which was sold to the United Kingdom. At the time, the Australian Government was paying a bounty on wine exports which enabled Australian wine-makers to sell at a very low price. Most of the wine exported was bulk wine and a large part of it was sold for blending and as a base wine for cocktails. Owing to lack of shipping space only a small quantity of wine was exported during the 1939-45 war years and furthermore, war measures in Britain gradually reduced the benefit of preferential duty to the point where it became non-operative. In immediate post-war years it was found that the demand for the style of wine previously supplied to the United Kingdom had lapsed and the export bounty was repealed in 1947. Subsequently wine-makers began to supply different styles of wines.

Exports

Under the Customs (Prohibited Exports) Regulations the export of wine from Australia is prohibited if the quality is such that it would be harmful to the reputation of Australian wine in the country to which it is exported. The Regulation is administered by officers of the Department of Customs and Excise, who with the assistance of inspectors appointed by the Wine Board, examine samples of each shipment of wine for export.

It is a requirement of the *Wine Overseas Marketing Act* 1929-1966 that a person wishing to export wine must hold a licence granted by the Minister of Primary Industry who reviews licences annually. In May 1967 renewals of export licences were granted to eighty-four exporters of whom thirty-four were South Australian companies.

In recent years exports have been fairly steady. The most important factor in overseas trade is price and the Australia wine industry is faced with continually increasing freight and labour costs and grape prices. It is becoming increasingly difficult to improve trade in the United Kingdom because of competition from lower-priced European wines, however, there are signs of improvement in trade with some other countries, notably Japan where, although the market is still very small, exports increased from 9,952 gallons in 1965-66 to 14,802 gallons in 1966-67.

Exports of Wine, Australia, Year Ended 30 June 1967
Principal Countries of Destination

Type	United Kingdom	Canada	New Zealand	Papua and New Guinea	Malaysia and Singapore	Total (a)
	Gallons					
Sparkling Wine	2,052	11,749	21,447	22,864	1,274	65,118
Still Wine, containing 27% proof spirit or less:						
Bottled	7,867	40,188	43,787	15,430	16,123	160,821
Bulk	458,336	50	—	211	13,561	486,150
Still Wine, containing over 27% proof spirit:						
Bottled	1,985	93,024	3,504	17,377	5,069	158,608
Bulk	585,203	226,096	12,191	524	851	904,708
Total	1,055,443	371,107	80,929	56,406	36,878	1,775,405

(a) Including other destinations.

Total exports of all wine from Australia in 1966-67 were 1,775,405 gallons of which 1,601,800 gallons were direct overseas exports from South Australia. Exports of wine from South Australia to other Australian States (whether for sale there or for subsequent export overseas) amounted to 9,028,600 gallons in the same year. Of the 122,000 proof gallons of brandy exported from Australia in 1966-67, 109,900 proof gallons were direct overseas exports from South Australia.

Exports of Wine and Brandy, South Australia, Overseas and Interstate

Type	1964-65	1965-66	1966-67
	'000 Gallons		
Wine:			
Interstate:			
New South Wales	3,065.6	3,605.4	4,068.7
Victoria	2,360.8	2,522.8	2,821.5
Queensland	564.4	617.0	736.5
Western Australia	923.3	1,037.7	1,079.8
Tasmania	299.0	332.2	322.2
Total Interstate	7,213.1	8,115.1	9,028.6
Overseas	1,882.3	1,802.7	1,601.8
Total	9,095.4	9,917.8	10,630.4
Brandy:			
Overseas	'000 Proof Gallons		
	99.7	105.8	109.9

Sales in Australia

Since exports of Australian wines during 1966-67 were only about 10 per cent of total beverage wine disposal, it is apparent that the home market is of great importance to the industry. In all Australian States alcoholic beverages are sold through retail outlets which must be licensed with the respective State Government authorities and to which wine producers may sell their products direct. In South Australia all such licensing is governed by the Licensing Act, 1967, which is discussed in detail on pages 133-5.

Total wholesale sales of beverage wine in Australia (including a small quantity of imported wine) in 1966-67 were 17,474,000 gallons, of which 3,139,000 gallons were sold in South Australia from stocks held in South Australian wineries, depots, bulk stores etc. Brandy sales for the same year were 1,029,000 proof gallons including 161,000 proof gallons in South Australia. These figures represent an average of 1.50 gallons of wine and 0.09 proof gallons of brandy per head of the Australian population. This is very low for a wine-producing country and vigorous efforts are being made by the Wine Board to encourage higher consumption.

Following a consumer survey of the Australian market in 1954 a national promotional campaign was started by the Wine Board. When this campaign was intensified during 1965-66 the designation Australian Wine Bureau was given to the publicity sections of the Wine and Brandy Producers Associations in various States and the Bureau took over the promotional aspects. The Bureau conducts wine tastings, provides an advisory service on wine, and handles public relations and special publicity. Its aim is to increase the demand for all types of wine and brandy throughout Australia, whereas individual wine-makers conduct their own advertising campaigns with the object of obtaining a greater share of the market for their own brands. The Bureau operates under the direction of a National Promotions Committee composed of representatives of the Australian Wine Board and the Federal Wine and Brandy Producers' Council; the latter body is the federal organisation of the States' Wine and Brandy Producers' Associations.

A marked increase in the consumption of table wines in Australia has been evident since promotional work was increased and sales have more than doubled in the last decade.

Immediately prior to the 1939-45 War, apparent consumption of wine in Australia was approximately 4 million gallons and, by 1965-66, had increased to over 15 million gallons annually. The following table shows sales of wines by wholesalers and wine-makers in their operations in South Australia. These figures should not be regarded as showing actual consumption in South Australia because they include sales to retailers and consumers in other States and exclude purchases from other States by South Australian retailers and consumers.

Wine: Wholesale Sales^(a), South Australia

Type	1962-63	1963-64	1964-65	1965-66	1966-67
'000 Gallons					
Sherry:					
Dry	119.5	133.3	137.2	152.4	155.2
Sweet	656.5	627.5	624.6	652.8	639.3
Dessert wine:					
Sweet white	226.5	205.6	196.5	195.1	190.5
Sweet red	512.2	554.8	577.4	604.9	608.7
Table wine:					
Dry white	194.9	254.4	263.0	318.8	420.0
Dry red	300.7	449.2	443.0	482.8	639.4
Other	(b)	(b)	(b)	109.7	103.5
Sparkling wine, all types:					
White	(b) 256.5	(b) 280.4	(b) 318.0	230.2	263.9
Red				22.9	55.8
Total	2,266.8	2,505.2	2,559.7	2,769.7	3,076.2

(a) Includes sales of imported wine.

(b) Other table wine included with Sparkling wine.

RESEARCH

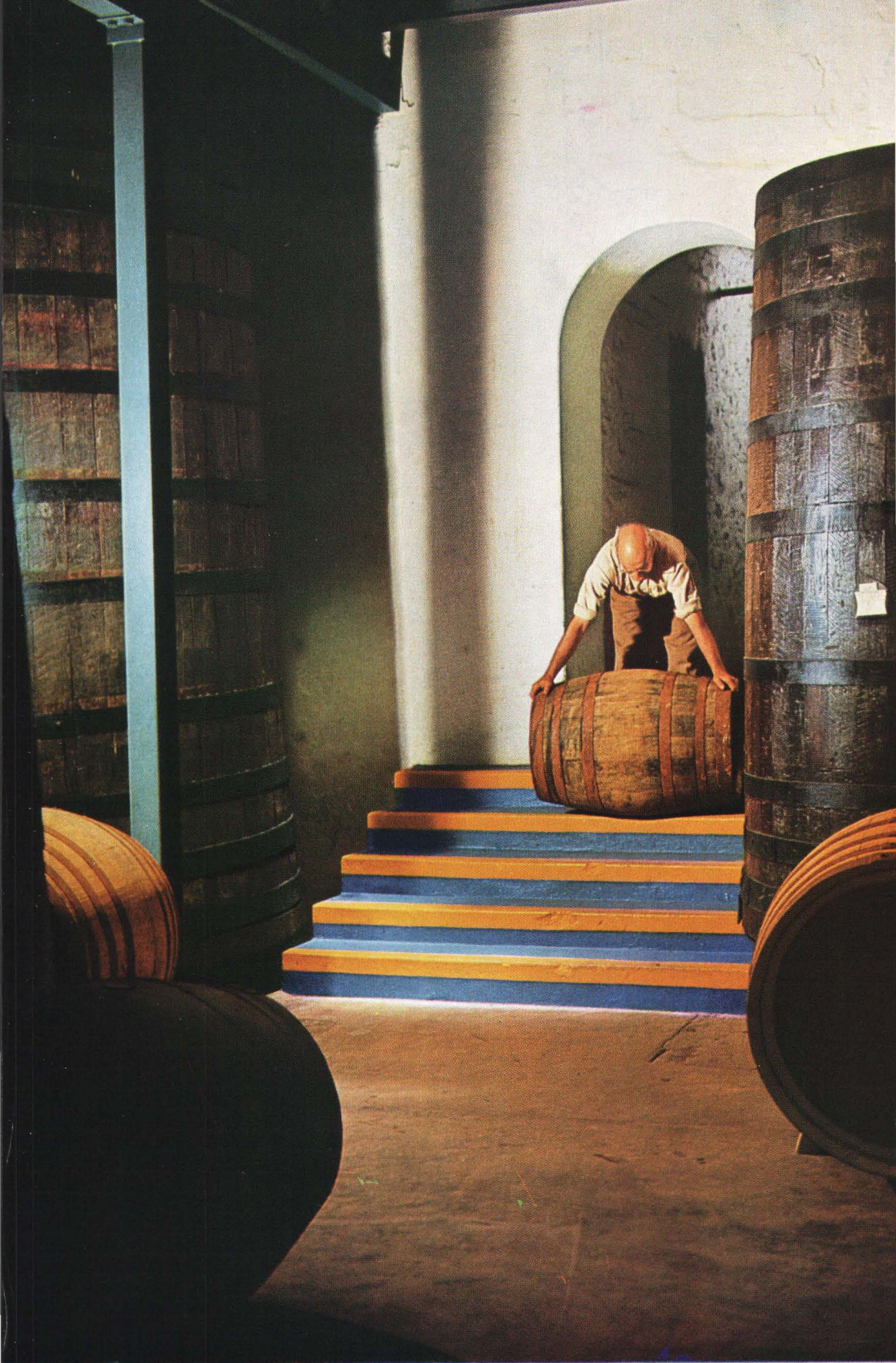
The development of a research unit specialising in problems of the Australian wine industry dates back to 1934, when the University of Adelaide undertook an investigation of spoilage in fortified wines on behalf of the Wine Overseas Marketing Board and appointed a research officer to carry out the investigation. The work started in the University's Department of Pathology in November 1934, but was transferred three months later to the Department of Agricultural Chemistry at the Waite Agricultural Institute of the University. This research on spoilage of wines paved the way for other investigations, which resulted in oenological research being continued at the Waite Institute.

The Council for Scientific and Industrial Research (as the C.S.I.R.O. was then called) first became involved in oenological research in 1938 when it granted a travelling studentship to enable an officer to gain overseas experience in this field. At about the same time a C.S.I.R. committee was set up to give advice and general direction on oenological research. This Oenological Research Committee consisted of one representative from each of four bodies: the C.S.I.R., the University of Adelaide, the Wine Board and the Federal Viticultural Council.

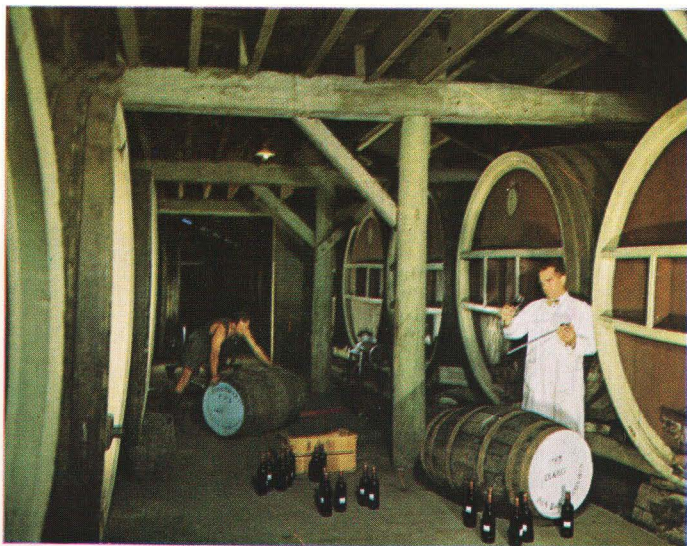
For several years oenological research financed by the Wine Board continued at the Waite Institute under the control of the University, but in 1945 the C.S.I.R. took control of the investigations and shortly afterwards began to share the cost equally with the Wine Board. Later, the scope of the investigations was extended and by 1950 the staff of the Oenological Research Section consisted of two research officers and one laboratory assistant. The results achieved had demonstrated to members of the Australian wine industry the value of scientific research. However, no further extension of size or scope proved possible until the passing of the Wine Research Act by the Commonwealth Parliament in May 1955 provided for the formation of the Australian Wine Research Institute.

Under this Act the Wine Research Institute was established as a type of industrial research association. It was created as a Federal organisation registered under the Companies Act of South Australia as a company limited by guarantee and not having a share capital and provision was made for a sum of \$1,000,000 held by the Federal Treasury in a Wine Industry Assistance Account to be transferred to a Wine Research Trust Fund. This money had accrued from a special excise duty levied on fortifying spirit for the purpose of paying an export bounty on fortified wine, payment of which had ceased in 1947. The Wine Research Trust Fund is controlled by the Commonwealth Minister for Primary Industry and is made available to the Wine Institute under specified conditions. In addition, the Institute receives grants from the wine industry through the Australian Wine Board and from the C.S.I.R.O. A council of nine members, responsible to the Minister for Primary Industry, controls the management of the Institute and representatives of the Wine Board, the Minister, the C.S.I.R.O. and the University of Adelaide, together with three additional members appointed for their knowledge of the scientific functions of the Institute, constitute the council.

Soon after its formation, the Wine Research Institute took over the responsibilities of the Oenological Research Committee and those officers of the C.S.I.R.O. who were engaged in oenological research at the Waite Institute transferred to the staff of the Wine Institute. One of the first undertakings of the Wine Institute was to build and equip its own laboratories and pilot winery; these buildings were completed in 1958. They are situated on about one and a half acres of land made available by the University of Adelaide at the Waite Institute near Glen Osmond, a suburb of Adelaide.



Wine maturing in oak casks and vats.

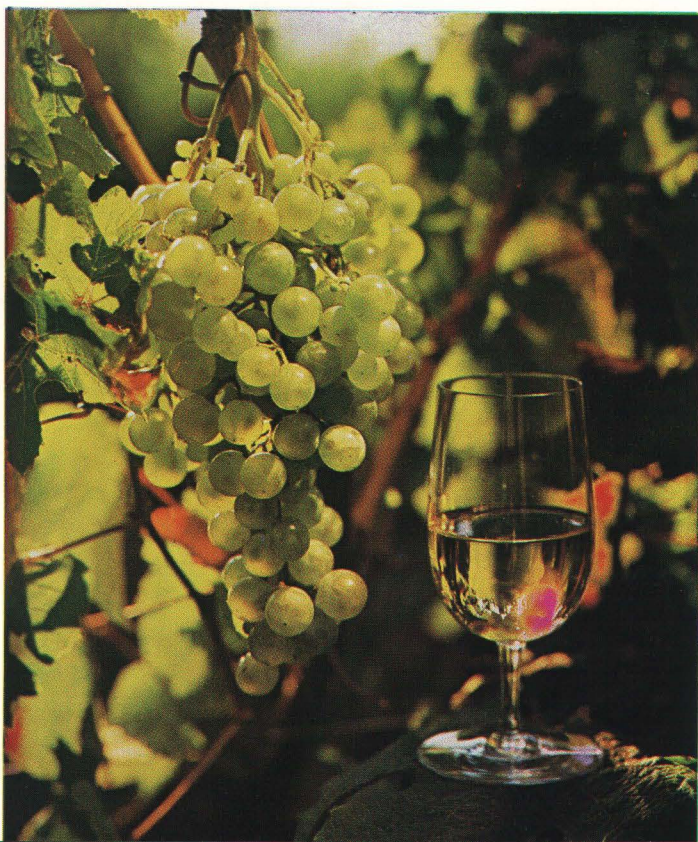


Australian Wine Board

Samples are taken regularly to check the progress of the wine.

Grapes and wine—the raw material and the final product of the wine-makers skill.

Australian Wine Board



The Wine Research Institute was established to promote and conduct research in connection with the technical problems of wine-making and the growing of wine-grapes. Liaison is maintained with the various State Departments of Agriculture which have long been engaged in the field of viticulture.

The functions of the Institute include both research and the provision of certain technical services to the industry throughout Australia. These services include the supply of selected yeasts to wine-makers, consultation on day-to-day technical problems, and when necessary, investigation of these problems in the laboratory. Wine-makers in all the wine-producing States make use of these technical services. The main function of the Wine Institute however, is research, which is concerned mainly with problems related to the quality of wine, although the importance of crop yields and economic production is fully recognised. Recent investigation has been related to the microbiological, chemical and physical changes which occur during the making and maturation of various wines, the relationship of these to the quality of wine, and the methods by which they may be controlled. Results of the Institute's investigations are published as scientific papers and progress reports are distributed half-yearly to ensure the early dissemination of information to wine-makers.

Research in viticulture is carried out by the C.S.I.R.O., the Waite Agricultural Research Institute and the State Department of Agriculture.

The C.S.I.R.O. Division of Horticultural Research has its headquarters at Glen Osmond, near Adelaide. The work of the Division is concerned primarily with improving the performance of woody perennial fruit crops, with particular attention to vines. Recent research has dealt with vine improvement, vine physiology and grape biochemistry. Another important project is the winegrape crop forecasting study, which aims to develop methods of providing reliable forecasts of crops to assist the wine-maker in his vintage planning as well as the grape-grower in organising the disposal of his grapes.

Viticultural investigations at the Waite Institute are especially concerned with physiological problems related to the setting of grapes.

The Department of Agriculture has viticultural experimental stations at Nuriootpa in the Barossa Valley and at Loxton on the River Murray. Research is particularly concerned with the nutrition and training of vines and the control of pests and diseases. The Department is also responsible for extension work in viticulture through its field stations and its District Advisers.

EDUCATION

Roseworthy Agricultural College provides instruction in both viticulture and oenology. Viticulture is one of the subjects included in the course for the Roseworthy Diploma of Agriculture and a special two-year course in wine-making and related subjects enables students to qualify for the Roseworthy Diploma of Oenology. This course was first conducted in 1936. The College has a small vineyard and winery as well as laboratories and although its main function is instruction of students, a certain amount of investigational work is also carried out in conjunction with the teaching. Roseworthy is the only establishment in Australia which offers a course of this type and many of the technologists employed in wineries throughout Australia have been trained at Roseworthy College. The Australian Wine Board grants two scholarships (every second year) to cover tuition for the Diploma. Twelve students were enrolled in the course at the beginning of 1968.

OTHER RURAL INDUSTRIES

Poultry Farming

The main concentration of poultry farmers is found close to Adelaide, with almost 87 per cent of table poultry sold in 1965-66 coming from the Central Statistical Division.

The poultry farming industry can be divided into two categories; the production of eggs, and the raising of poultry for meat. The annual average egg production controlled by the South Australian Egg Board was 11.8 million dozen in the five years ended 1956-57, 10.6 million dozen over the next five years and 10.5 million dozen in the five years ended 1966-67. However, these figures do not take into account movement of eggs interstate independently of the Egg Board, which may represent a significant proportion of total egg production.

Statistics collected relating to the sale of table poultry show a rapid expansion in this side of the industry. In 1965-66 the number sold was 3,072,000, this being over six times the number sold five years previously.

Poultry Industry^(a), South Australia*At 31 March*

Particulars	Unit	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
		Number					
Hens and pullets .	'000	1,714	1,550	1,534	1,553	1,408	1,631
Other fowls and chickens	'000	280	357	495	508	753	1,103
Ducks	'000	54	52	55	59	71	83
Turkeys	'000	64	50	55	60	71	78
Geese	'000	21	20	19	18	17	18
Table poultry sold.	'000	650	1,213	1,595	2,229	3,072	(b)
Egg production (c)	'000 dozen	11,387	9,918	8,731	9,261	11,198	13,176

(a) Excludes poultry kept in backyards, etc.

(b) Not collected.

(c) Recorded by the South Australian Egg Board.

Beekeeping

Beekeeping in South Australia is only a small industry, for in 1966-67 there were less than 800 'keepers with five or more hives. Of necessity, most commercial apiarists operate on a migratory basis, following the flowering of the various species of honey flora. The production of honey and beeswax fluctuates considerably from year to year, depending upon seasonal conditions.

Beekeeping^(a), South Australia

Season	Beekeepers	Hives		Honey Produced	Yield of Honey per Productive Hive	Beeswax Produced
		Productive	Un-productive			
	No.	No.	No.	'000 Lb	Lb	'000 Lb
1962-63	842	51,010	18,590	4,147	81	56
1963-64	857	63,142	8,535	9,721	154	134
1964-65	781	58,728	13,900	6,527	111	90
1965-66	793	65,522	9,333	9,929	152	136
1966-67	784	57,311	15,511	6,588	115	93

(a) Excludes particulars for producers having less than five hives.

9.2 MINING, FORESTRY AND FISHERIES

MINING

INTRODUCTION

In common with many industrialised countries, South Australia has a well developed and growing mineral industry. While iron ore is the major product, the State also has very large resources of industrial minerals which make up a significant proportion of the total annual value of mineral production—exceeding \$72 million in 1966.

Prior to the founding of the colony in 1836, small quantities of salt had been gathered in the salt lakes of Kangaroo Island. Soon after settlement was established at Adelaide, the first metallic mineral discoveries were made in the silver-lead lodes of Glen Osmond and copper ores of Montacute. Of much greater significance, however, were the discoveries of carbonate copper ores at Kapunda in 1843 and at Burra in 1845 followed in 1860 by the major copper fields of Wallaroo and Moonta.

While the first two were comparatively short lived, the Wallaroo-Moonta field prospered, surviving as a major copper producing field for sixty-three years until final closure in 1923. The relative importance of copper in the early years of the State can be seen from the following figures.

Value of Mineral Production to 31 December 1918, South Australia

	\$
Copper	27,815,508
Iron ore	2,993,466
Salt	1,768,258
Gold	1,313,840
Gypsum	238,832
Other	2,199,212
Total	36,329,116

Details of production in various years since 1841 are given in the Statistical Summary on page 587.

During the period 1852-1900 gold discoveries were made at Echunga, Barossa, Waukarina, Woodside, Mannahill, Teetulpa and Tarcoola. Although these fields attracted interest for a short time, all were small by world standards and most faded quickly into obscurity.

The major mineral industry of today, iron mining in the Middleback Ranges, had its beginnings early in the century as a supplier of flux to the lead smelters at Port Pirie. Developed as a source of iron ore for blast furnaces in the eastern States in 1915 it now supplies a major proportion of the requirements of the Australian steel industry. A further development is the establishment of an integrated steel industry at Whyalla.

Industrial minerals such as salt, gypsum, opal, talc, barite, and limestone have grown in importance in recent years. The quantity and value of production of the major minerals for years 1964 to 1966 are listed in the following table.

Mining and Quarrying Production, South Australia*As recorded by the Director of Mines*

Mineral	Quantity			Value		
	1964	1965	1966	1964	1965	1966
	'000 Tons			\$'000		
Metal mining :						
Iron ore	4,367	4,392	4,799	38,991	38,850	42,377
Pyrite concentrate	86	93	101	1,202	1,307	1,415
Other .....	..	..	..	20	11	19
Fuel mining :						
Coal (sub-bituminous) ...	1,736	2,016	2,021	3,296	3,263	3,226
Non-metal mining :						
Barite	11	10	11	116	137	169
Clay	596	492	552	811	734	790
Dolomite	222	245	238	382	425	425
Gypsum	581	560	603	1,392	1,346	1,476
Limestone	1,542	1,562	1,455	2,321	2,346	2,195
Opal .....	..	..	..	2,632	3,019	3,625
Salt	440	513	520	1,761	2,051	2,078
Talc and soapstone	8	10	6	96	155	96
Other .....	..	..	..	117	131	125
Total mining .....	..	..	..	53,137	53,776	58,016
Construction material quarrying	14,213	13,148	13,279	14,459	14,087	14,326
Total mining and quarrying .....	..	..	..	67,597	67,863	72,342

.. Not applicable.

INDIVIDUAL INDUSTRIES

Details of mining of individual minerals are given below. Reference should also be made to an article in Part 1.3, pages 17-18 which contains particulars of the location of mineral resources. Map 5 on page 19 shows a number of localities referred to in this section.

Iron Ore

The only proved high grade iron ores of South Australia lie in the Middleback Ranges to the west of Whyalla. The ranges are composed primarily of iron-rich rocks in which occur local concentrates of high grade ore.

The Iron Monarch deposit near Iron Knob has provided the bulk of the iron ore for Australia's steel industry for many years. Production from this and the smaller deposits of Iron Prince and Iron Baron is now maintained by the Broken Hill Pty Co. Ltd at the rate of over four million tons annually. The bulk of the ore is shipped to Newcastle and Port Kembla, but a proportion is used for the production of pig iron in the Whyalla blast furnace. Developments at Whyalla have included the new, larger blast furnace and an integrated steel plant, together with a considerable expansion of the town. In addition basic oxygen steel-making plant facilities have been extended and a \$20 million pellet plant has been under construction since 1966 and is expected to commence production during 1968.

Reserves of high grade iron ore, though large, are limited in extent, being estimated at about 170 million tons. The grade of ore at 62 per cent iron is exceptionally high by world standards, with the deposit at Iron Monarch having

added importance for its high manganese content. In view of the known limitation of high grade ore, the Broken Hill Company has carried out an active exploration programme, and is also planning future use of the very large reserves of low grade siliceous ores known to exist in the Middleback Ranges.

The South Australian Government is conscious of the need for further reserves of iron ore, and has carried out extensive exploration in the Middleback Ranges and elsewhere. Current Department of Mines work is directed at several deposits on lower Eyre Peninsula, some of which hold promise of substantial tonnages of low grade ore.

Barite

There are widespread occurrences of barite (barytes) throughout the Adelaide System rocks of South Australia. Deposits are located in a number of areas including the Mount Lofty and Flinders Ranges and the Olary district. Its main use is in the paint industry and as a drilling mud in oil drilling.

For some years the principal producer has been the Oraparinna mine in the Flinders Ranges, which is the largest producer of high-grade barite in Australia.

Gypsum

South Australian deposits contain by far the largest part of Australian reserves of gypsum. The deposits have in general been formed in coastal basins cut off from the ocean, giving rise to extensive deposits of rock gypsum. The most important coastal deposits are found at Lake MacDonnell, Stenhouse Bay and on Kangaroo Island. Inland deposits mainly of seed gypsum occur at Moonabie, Lake Fowler, Cookes Plains and along the Murray River. The gypsum deposits have been worked extensively over the past fifty years to provide the bulk of Australasian requirements for the plaster industry and for portland cement manufacture. Present production now exceeds 500,000 tons annually.

Reserves of high grade gypsum in Lake MacDonnell have been proved by the Department of Mines to exceed 500 million tons, sufficient to meet Australia's requirements for many generations. Because of its remote location on the West Coast of South Australia, development of the deposit has been slow. However, with installation of bulk loading equipment and the development of overseas markets, considerable expansion of operations at Lake MacDonnell may be expected.

Salt

The semi-arid climate and high evaporation rate along much of South Australia's coast line, together with the high salinity of the gulf waters, create very favourable conditions for the production of salt by solar evaporation. The availability of sites close to cheap transport led to the establishment of solar salt works at the head of Spencer Gulf near Port Augusta and at Whyalla, at Price on the eastern shore of Yorke Peninsula, and in 1940 at Dry Creek near Adelaide. In addition several operators recover salt from shallow salt-lakes on Yorke Peninsula and elsewhere.

At present South Australia produces over 500,000 tons annually, and provides some 80 per cent of Australia's salt requirements. The industry is capable of very great expansion to cope with any increase in demand.

Opal

Precious opal was discovered in 1915 at Coober Pedy and in 1930 at Andamooka. From very small beginnings the value of opal production has grown till it now exceeds \$3 million annually. In terms of value it ranked second only to iron ore as the most important mineral produced in South Australia during 1966.

In spite of the value of opal being won at present, opal mining remains a small scale operation. Both Andamooka and Coober Pedy are small outback settlements with few amenities and with floating populations. The distances from Port Augusta to Andamooka and Coober Pedy are 200 and 400 miles respectively.

Mining at both centres is relatively shallow, rarely exceeding ninety feet. The extent of the opal fields is not known as there has been no systematic exploration, but it is probable that the fields will continue to yield the gem for many years.

Pyrite

In the vicinity of Nairne, thirty miles south-east of Adelaide, there has long been known to exist an enormous body of iron pyrite extending for a distance of at least six miles. Until 1950 this deposit was of little economic significance. However, a world shortage of sulphur, upon which the fertiliser industry is dependent for sulphuric acid, made it necessary to utilise local sources at that time.

Limited exploration of the deposit was made by private enterprise, and extended by the Department of Mines and resulted in the proving over some two miles in length, of fourteen million tons of mineable ore containing 10 per cent of recoverable sulphur. Development, sponsored and aided by the Government, was then undertaken as a joint enterprise by local companies. Regular production commenced in 1955 and an annual output in excess of 80,000 tons of concentrate containing the equivalent of 30,000 tons of sulphur is utilised for acid and fertiliser manufacture at Birkenhead.

Talc

The principal occurrences of talc are to be found at Mount Fitton in the Northern Flinders Ranges and in the Gumeracha district. From these sources approximately 8,000 tons a year are mined to supply about 50 per cent of Australia's requirements. The Mount Fitton talc is particularly high grade, and is in demand for use by the cosmetic industry. Lower grade material is used in the rubber, paint, and ceramics industries.

Coal

South Australia is deficient in bituminous coal resources and the only mining is of sub-bituminous coal at Leigh Creek. The field was discovered in 1888 during dam sinking operations, leading to an unsuccessful attempt at underground mining in the years 1892-1908.

The present development of the field commenced with Department of Mines drilling operations in 1941. The Electricity Trust of South Australia assumed control of the field in 1948 and developed it as a source of fuel for the Port Augusta power station. Meanwhile testing by the Department of Mines continued for some years, proving a total of fifty-five million tons of coal available by open cut methods and a further eighty-one million tons of underground reserves.

Coal production in 1966 was over two million tons. Almost the entire production is railed to Port Augusta for use in power generation to supply a large proportion of the State's requirements of electric power.

Limestone and Dolomite

The combined tonnage of limestone and dolomite extracted each year is in excess of 1,650,000 tons. The principal deposits mined are limestone at Rapid Bay and dolomite at Ardrossan for the steel industry, limestone at Penrice for the chemical industry, lime sand at Wardang Island for the metallurgical industry, and limestone at Angaston and Klein Point for the cement industry. In the process of development are the very large lime sand deposits of Coffin Bay. It is anticipated that approximately one million tons of sand will be taken from Coffin Bay each year and railed to Port Lincoln for trans-shipment to the Whyalla smelters and interstate.

Limestone Production, South Australia

Excluding limestone used as building stone, road materials, etc.

Classification	1962	1963	1964	1965	1966
	'000 Tons				
Flux	604.2	751.8	591.9	602.6	647.1
Cement	580.5	594.5	713.5	692.3	538.8
Chemical	195.6	214.6	222.3	244.8	244.5
Other	19.8	13.2	13.8	22.0	24.2
Total	1,400.1	1,574.1	1,541.5	1,561.7	1,454.6

Clay

South Australia possesses a wide variety of clays which are used for industrial purposes such as cement manufacture, building bricks and roofing tiles, refractory ware, pottery and ceramic purposes. Because of the scarcity of local timber supplies, softwoods excepted, much greater use is made of clay bricks for construction in South Australia than in other parts of the Commonwealth. The clay brick industry is concentrated near Adelaide.

There are also widely distributed occurrences of special clays for ceramic and refractory ware, the most noteworthy being the ball clay at Woocalla, china clay at Mount Crawford, and fire clay at Birdwood, Littlehampton, Tea Tree Gully, Booleroo Centre, and Lincoln Gap.

Clay Production, South Australia

Classification	1962	1963	1964	1965	1966
	'000 Tons				
Brick clay and shale	338.2	407.3	517.1	386.3	450.9
Cement clay (shale)	14.6	13.0	21.1	29.2	35.2
Fire clay	20.8	29.5	27.2	27.4	24.0
Kaolin and ball clay	2.2	3.8	4.5	7.4	7.6
Pottery clay	30.4	34.7	26.0	41.8	34.4
Total	406.2	488.3	595.9	492.1	552.1

The Department of Mines, together with the Australian Mineral Development Laboratories, is continually engaged in investigations relating to the usage of clay deposits encountered during geological surveys throughout the State.

Construction Material Quarrying

Post-war industrial expansion, accompanied by extensive housing programmes and highway construction has resulted in a rapidly increasing demand for construction materials. Total production has risen from less than two million tons in 1947 to over fourteen million tons in 1964; production was thirteen million tons in 1965 and 1966.

A variety of building stones is quarried including Mount Lofty sandstone, a white stone which hardens in the atmosphere; Basket Range sandstone, a dark coloured stone of pleasing appearance, and Mount Gambier limestone, a polyzoal limestone of the South East. Limestone deposits have also been worked at Overland Corner, Cadell and Waikerie. A quantity of granite is extracted each year and marble occurrences are worked at Angaston, Kapunda, Macclesfield and Paris Creek. The main sources of slate in South Australia are at Willunga and Mintaro. Both areas supply paving slate and a large quantity of Mintaro slate is dressed and polished.

Building Stone, South Australia

Type of Stone	1962	1963	1964	1965	1966
	'000 Tons				
Granite	2.2	2.4	2.1	2.9	4.4
Limestone	21.3	13.5	13.9	14.1	11.2
Marble	1.4	1.7	1.8	2.2	2.2
Sandstone	9.3	4.8	10.8	9.0	8.4
Slate	2.6	2.7	2.9	3.4	4.4
Total	36.8	25.1	31.5	31.6	30.6

Production of other construction materials is shown in the following table. The importance and expansion in production of limestone (predominantly for construction of roads) and quartzite (mainly in the form of screenings) can be seen.

Road and Other Construction Materials, South Australia

Type of Material	1962	1963	1964	1965	1966
	'000 Tons				
Limestone	4,188	4,127	6,051	5,449	5,615
Quartzite	2,827	3,146	3,624	3,759	3,454
Sand	1,516	2,031	1,854	1,795	1,586
Other materials	2,035	2,101	2,653	2,113	2,593
Total	10,566	11,405	14,182	13,116	13,248

MINERAL DEVELOPMENTS

The natural gas discovery at Gidgealpa has developed into a commercial prospect with the success of four holes on the nearby Moomba structure, followed by recent success at Daralingie. Established reserves of natural gas on the field have been assessed at 800 billion cubic feet, but are now under review. A survey of the natural-gas market in South Australia established the feasibility, as a commercial proposition, of a pipeline to convey gas from the field to the major potential consumers in the Adelaide area. These consumers are the Electricity Trust of South Australia, the South Australian Gas Company and the major industrial consumers of fuel.

A study of the natural gas pipeline proposal was made in which estimates were based on the assumption that the pipeline utility would be operated by a Natural Gas Pipelines Authority set up by the Government which would merely transport the gas on a cost of service basis with the gas being produced on the field and sold in the Adelaide area by the producers. The initial cost of an 18 inch pipeline, 486 miles long—the longest such pipeline in Australia—was estimated at \$31 million. Total cost to bring the pipeline system to maximum capacity within twenty years, including compressor stations and loop lines, has been estimated at \$76 million.

In March 1967, Parliament passed the Natural Gas Pipelines Authority Act which established the Natural Gas Pipelines Authority with powers to construct and operate pipelines for the conveyance of natural gas. Recent discussions between the Commonwealth and State Governments regarding finance for the pipeline concluded with the Commonwealth granting approval to the State to raise a \$20 million loan for construction of the pipeline.

The discovery of increased reserves of natural gas has resulted in the Natural Gas Pipelines Authority increasing the size of the pipeline from 18 inches to 22 inches on the grounds that by increasing the carrying capacity of the pipeline unit costs of transporting natural gas could be appreciably reduced. Subsequently early in March 1968 tenders were called for both the supply of pipes and for the construction of the pipeline.

An interesting development resulting from the petroleum search has been the discovery of very pure carbon dioxide gas at the Caroline No. 1 Well, some twelve miles east of Mount Gambier. Plans for commercial exploitation of this gas are well advanced.

During 1967 construction of the first Australian built semi-submersible drilling rig, the 'Ocean Digger' was completed at the Whyalla shipyards of the Broken Hill Proprietary Co. Ltd. The first well drilled offshore by the rig was ESSO Crayfish No. 1A, near Robe, in the south-east of the State.

Exploration for copper and other minerals has continued at a tempo comparable with recent years. At the end of 1967, thirty-eight special mining leases totalling 23,859 square miles were held, principally in the Flinders Ranges and Olary province. In spite of the long history of copper discovery and development in this State, there has been negligible production of this metal for over forty years. However, at present there is a revival of copper exploration with private companies and the Mines Department participating. During 1967, investigation continued in the Wallaroo-Moonta district and of three old copper mining centres on private land (Burra, Kapunda and Callington); Government exploration activities were carried out at several locations in the Flinders Ranges and in the far north-west of the State.

EMPLOYMENT AND WAGES

The number of persons engaged in mining and quarrying in South Australia (expressed as an average over the period of operation) is shown in the next table. The increase in recent years has occurred as a result of a rapid rise in the number of opal miners at Coober Pedy and Andamooka.

Employment in Mines and Quarries, South Australia
Average Number Employed During Period Worked^(a)

Classification	1962	1963	1964	1965	1966
Mining :					
In mines with 4 or more employees	1,249	1,106	1,112	1,089	1,064
In mines with less than 4 employees	952	992	969	1,050	1,175
Construction material quarrying :					
In quarries with 4 or more employees ..	740	757	919	994	898
In quarries with less than 4 employees ..	255	263	242	239	256
Total	3,196	3,118	3,242	3,372	3,393

(a) Includes working proprietors.

Wages and salaries paid in the larger mines and quarries are shown in the following table. Drawings by working proprietors are not included.

Salaries and Wages Paid in Mines and Quarries, South Australia
In Mines and Quarries With 4 or More Employees During Period Worked

Classification	1962	1963	1964	1965	1966
	\$'000				
Mining :					
Salaries	421	465	534	517	571
Wages	2,752	2,492	2,598	2,659	2,745
Construction material quarrying :					
Salaries	128	125	167	172	184
Wages	1,321	1,566	2,029	2,110	2,054
Total salaries and wages	4,621	4,648	5,328	5,457	5,554

MINING ADMINISTRATION

The Department of mines is responsible for:

- The administration of mining legislation including the granting of mineral leases and collection of royalties and fees.
- Geological and geophysical investigations to ascertain the extent and nature of the State's mineral resources.
- Boring to test mineral deposits and underground water supplies.
- Development of sub-surface water supplies for farming, pastoral, irrigation and mining purposes.
- The testing and treatment of minerals, generally in arrangement with the Australian Mineral Development Laboratories.

The Mining Act, 1930-1962 deals with such subjects as authority to prospect and the acquisition of mining titles.

The Mines and Works Inspection Act, 1920-1966 regulates in respect to 'the state and condition of the mine, machinery, ventilation, and all other things relating to the safety, health and well being of the employees and general public'.

The Underground Waters Preservation Act, 1959-1966, proclaimed in February 1967, provides for the control of water boring and of groundwater usage in 'defined areas', and for the licensing of drillers.

FORESTRY HISTORICAL

South Australia was the first State to inaugurate a forest policy. This, however, was probably due more to need and past misgivings than to foresightedness, as much of the productive areas of the State had been denuded of their natural vegetation by the early settlers. The first attempt came in 1873 with the passing of an Act authorising the issue of a land order valued at \$4 per acre to landowners who planted and maintained forest areas. Unfortunately only one landowner successfully availed himself of this offer.

Forest management in South Australia dates from the Forest Board Act of 1875 when 195,000 acres were placed under the control of a Board, together with the power to proclaim further reserves. The two basic functions of the Forest Board were to promote the protection, and hence the regeneration, of natural vegetation, and to demonstrate the practicability of forestry.

By 1877 the Board had established nurseries at Bundaleer and Wirrabara in the Flinders Ranges and Mount Gambier in the lower South East of the State. It had also planted 1,000 acres of eucalypts and pines at Bundaleer and had carried out small plantings of pines around the Mount Gambier lakes. Further plantings followed at Wirrabara and Mount Burr. *Pinus radiata*, the native of California which today dominates the South Australian forestry scene, was first planted experimentally in 1876.

The first Conservator of Forests took office in 1878. The Forest Board was abolished in 1883 and the Woods and Forests Department established, the Conservator of Forests becoming departmental head. This was the first forests department to be established in the then British Empire. Forest reserves in that year stood at 150,000 acres.

In 1881 the Government introduced a scheme for the free distribution of seedlings to landowners and between 200,000 and 300,000 trees were distributed each year until 1924-25 when the scheme was terminated.

By 1890, with continued planting, particularly in northern areas, a total of over 9,000 acres had been planted and the area of reserves had increased to 225,000 acres. During these early years a multiplicity of species was planted in an effort to determine those best suited to the local environment. From this astute experimentation there emerged a distinct pattern of development. By 1909 a pronounced swing to softwood plantings was under way although softwoods still accounted for only 12 per cent of total plantations. The first pines were felled between 1903 and 1910, and their encouraging yield provided such an impetus for further plantings that softwoods accounted for 35 per cent of area planted by 1920.

The future pattern of forestry development was now well established. The South East had become the centre of forestry operations and *Pinus radiata* the dominant species. The planting of hardwoods had virtually ceased, and in 1923 the Government released many of the small reserves and plantations in the north, the operation of which had ceased to be economical.

Forestry development entered a period of vigorous growth in the mid 1920s when greatly increased expenditure was available to the State authorities and when private interests, impressed by early successes with *Pinus radiata*, began developing plantations. Prior to 1924-25 the State's expenditure on afforestation had come from general revenue, but henceforth it was to come from loan funds thus permitting a considerable increase in expenditure. Furthermore, the Development and Migration Commission decided to sponsor a large scale afforestation programme and in the period 1925-1937 advanced a total of \$670,000 for this purpose. During this period the Woods and Forests Department established on average over 5,000 acres of new forest per annum and considerable areas were planted by private interests. Details of planting in this and subsequent periods are given in the following table.

Area Forests Planted, South Australia

Particulars	1929-1936	1937-1944	1945-1952	1953-1960
	Acres			
State	47,500	18,650	24,050	27,746
Private	12,000	6,550	2,100	10,099
Total	59,500	25,200	26,150	37,845

THE FOREST ESTATE

There are an estimated 23.5 million acres of land classified as forests in South Australia although most is of very low grade and of little economic value. Some 2.5 million acres, however, are currently considered as exploitable but half of this area yields only firewood. Although uneconomic for timber getting, many forests are of considerable value through soil conservation, and timbered areas help regulate climate and provide shelter, shade and natural beauty.

Certain areas have been set aside as State forest reserves, the area thus reserved at 30 June 1967 being 287,213 acres. In addition the Woods and Forests Department is responsible for 4,000 acres of planted forests on reservoir lands. Although the total area reserved has shown little fluctuation since 1929 the area under plantation has been consistently increasing.

Indigenous Forests

The natural forests of South Australia consist of eucalypt hardwoods restricted principally to the Mount Lofty Ranges, the lower Flinders Ranges, the southern portion of Eyre Peninsula, and the South East. A few species are of commercial value and these are devoted largely to the production of poles, posts, rails and sleepers. The mallee lands provide an important source of firewood. Areas of forest reserves not yet planted with conifers are maintained in natural hardwoods but it is unlikely that further hardwood plantations will be established except in small trial areas.

Exotic Plantations

Exotic softwoods accounted for 98 per cent of the planted forest area at 30 June 1967.

As can be seen from the accompanying tables the vast majority of planted forest is situated in the South East. With an annual rainfall in excess of 25 inches the South East has proved an ideal site for forestry activity. The Mount Lofty Ranges, geographically suitable for pine forests, contain only limited areas due to the high price of land.

The following table clearly illustrates the overwhelming importance of one species, *Pinus radiata*, in the composition of South Australian forests.

Forests, South Australia

Area Planted During 1966 and Area of Plantations at 30 June 1967

Location	Planted during 1966			Plantations at 30 June 1967		
	Softwoods		Hard-woods	Softwoods		Hard-woods
	<i>Pinus Radiata</i>	Other Pinus		<i>Pinus Radiata</i>	Other Pinus	
State Forests	Acres					
South East :						
Penola	689	196	—	26,816	3,855	197
Mount Burr	1,109	85	—	29,028	2,142	168
Mount Gambier	327	60	—	17,640	1,571	21
Myora	114	—	—	10,943	485	—
Caroline	1,416	128	—	9,631	794	—
Tantanoola.....	35	—	—	6,288	355	11
Comaum.....	374	31	3	5,417	559	16
Other.....	138	—	—	2,336	270	3
Total South East	4,202	500	3	108,099	10,031	416
Central :						
Mount Crawford.....	288	32	—	6,953	754	508
Kuitpo	13	20	—	5,036	983	353
Reservoir areas	278	—	—	1,725	150	1
Other.....	58	3	—	3,563	617	150
Total Central	637	55	—	17,277	2,504	1,012
Northern	204	19	—	5,508	224	1,039
Murray Lands	—	—	—	—	15	120
Western	—	—	—	75	33	850
Total State forests....	5,043	574	3	130,959	12,807	3,437
Private Forests						
South East (a)	n.a.	n.a.	n.a.	34,995	—	—
Other.....	n.a.	n.a.	n.a.	3,366	—	285
Total private forests .	1,990	1	—	38,361	—	285
Total forests.....	7,607	4	—	182,127	—	3,722

(a) Small plantations on farming properties have been included in 'Other'.

n.a.—Not available.

Despite the virtues of relative ease and cheapness in planting and rapid growth *Pinus radiata* is likely to play a less prominent role in future forestry expansion as areas suitable for its cultivation are now limited. Experimental plantings have proved *Pinus pinaster* to be most promising on sites unsuitable for *Pinus radiata* and this species should become increasingly prominent.

The 574 acres of 'Other' softwoods planted in State forests during 1966 were mostly *Pinus pinaster*, bringing the total area of that species standing at 30 June 1967 to 10,903 acres. In all, some twenty-five species of pines are growing in State forests, although the majority were planted in earlier periods of experimentation.

Forests, South Australia

Net Area of Plantations at 30 June

Location	1963	1964	1965	1966	1967
State Forests					
South East :	Acres				
Penola	27,550	28,573	29,134	30,004	30,868
Mount Burr	27,466	28,630	29,166	30,226	31,338
Mount Gambier	17,477	18,654	18,803	19,152	19,232
Myora	9,666	10,807	11,100	11,369	11,428
Caroline	6,281	7,081	7,855	8,885	10,425
Tantanoola (a)	5,925	6,165	6,270	6,619	6,654
Comaum	4,535	4,904	5,205	5,586	5,992
Other	1,801	2,005	2,207	2,472	2,609
Total South East ..	100,701	106,819	109,740	114,314	118,546
Central :					
Mount Crawford	7,160	7,394	7,527	7,668	8,215
Kuitpo	6,146	6,277	6,281	6,338	6,372
Reservoir areas	1,115	1,238	1,391	1,598	1,876
Other	4,121	4,198	4,393	4,521	4,330
Total Central	18,542	19,107	19,592	20,125	20,793
Northern	5,725	6,088	6,269	6,548	6,771
Murray Lands	135	135	135	135	135
Western	991	932	942	958	958
Total State forests ..	126,094	133,081	136,678	142,080	147,203
Private Forests					
South East (b)	33,003	33,044	34,136	35,107	34,995
Other	2,579	2,818	3,028	3,491	3,651
Total private forests	35,582	35,862	37,164	38,598	38,646
Total forests ..	161,676	168,943	173,842	180,678	185,849

(a) Tantanoola forest created from land previously included in Mount Gambier and Mount Burr forests.

(b) Small plantations on farming properties have been included in 'Other'.

Seedlings raised in nurseries are planted out at a density of 700-900 trees to the acre. A series of thinnings, starting when the trees are about ten years old, reduces the density to 100-150 trees to the acre at age thirty. These thinnings are carried out on a commercial basis and make an important and very substantial contribution to timber and pulpwood output. The clear felling age is

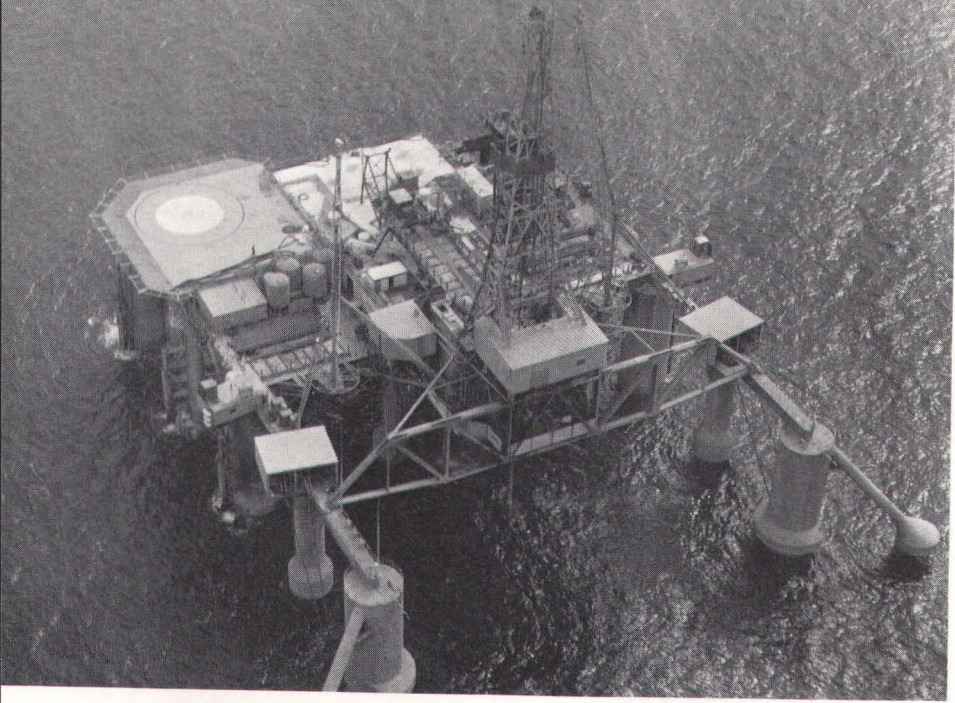


Lands Department
Festival of Arts 1968 street decorations—a view from King William Street to Victoria Square.

Festival of Arts 1968 decorations and lighting looking from Victoria Square to King William Street.

S.A. Govt Tourist Bureau





Broken Hill Pty Co. Ltd

The *Ocean Digger* semi-submersible drilling rig, built at Whyalla, on location off the coast of South Australia.

The new fountain in Victoria Square Adelaide, built to commemorate the 1963 Royal Visit, was opened by His Royal Highness, Prince Philip the Duke of Edinburgh, in May 1968.

Adelaide Advertiser



aimed at not less than forty years although for management purposes some earlier felling has been necessary in the past.

FOREST ADMINISTRATION

State Forests

State forests are administered by the Woods and Forests Department. The Conservator of Forests is departmental head and each forest reserve is in the charge of a professionally trained forester.

In earlier years when large areas of plantations were being established expenditure by the department naturally exceeded revenue, but since 1942-43 the revenue has exceeded expenditure including depreciation and interest on loans. By 1954-55 accumulated surpluses had almost matched expenditure on establishment and maintenance of plantations, and it was decided to pay future annual surpluses of the department to Consolidated Revenue.

Funds employed by the Woods and Forests Department, including its milling operations, amounted to \$23,235,000 at 30 June 1966 of which \$10,603,000 was represented by timber stands and land at net cost. During 1965-66 working account receipts from the forestry operations of the department were \$7,106,000 as against payments of \$4,582,000. During the year a contribution of \$1,200,000 was made from surpluses on operations to Consolidated Revenue.

Private Forests

Private forests accounted for approximately 21 per cent of the planted area at 30 June 1966. A small number of private companies operating pine plantations in the South East controlled the bulk of private forest land, the balance representing a large number of holdings of a few acres on farming properties throughout the State.

PRODUCTION

The following table gives the quantity and value of output of forest logs over the last five years.

Forest Log Production, South Australia

Year	Softwoods		Hardwoods	
	Quantity	Value (a)	Quantity	Value (a)
	'000 Sup Ft (b)	\$	'000 Sup Ft (b)	\$
1961-62	277,388	4,566,420	6,892	203,354
1962-63	312,304	5,169,108	5,489	122,338
1963-64	308,651	5,073,842	7,504	179,338
1964-65	322,018	5,630,964	6,944	164,411
1965-66	320,981	5,898,746	5,849	128,825

(a) Value on mill skids.

(b) Full round measure.

Log production depends on the supply of mature trees and on thinning operations, and planned forestry management ensures that the amount of timber cut each year does not exceed new growth. As planting during the ten years prior

to 1925 was relatively light the number of mature trees available in recent years has been limited, and thinning operations have provided approximately two-thirds of log production.

By contrast the extensive plantings of 1926-34 are now reaching maturity and production is therefore expected to increase rapidly in the immediate future. Forestry in South Australia has almost reached a stage where the full annual yield can be cut in perpetuity.

Other forestry products include firewood, yacca gum, wattle bark and eucalyptus oil.

EMPLOYMENT

The number of persons directly employed by the Woods and Forests Department in forestry activity in recent years is given below. The Department also employs some 600 persons in milling activities.

The townships of Mount Burr (population 1,738 at 30 June 1966) and Nangwarry (977) are maintained by the department.

State Forestry Employees, South Australia

At 30 June

Classification	1963	1964	1965	1966	1967
Professional staff					
Foresters	33	35	35	32	32
Other	45	41	39	36	35
Non-professional field staff	8	7	7	12	9
Clerical staff	102	97	103	109	114
Labour (silvicultural forest works, etc.)	307	275	244	288	254
Total	495	455	428	477	444

The extraction of timber from State forests is carried out by contractors. At 30 June 1967, 379 persons were employed extracting timber from forests in South Australia.

RESEARCH AND ADVISORY SERVICES

The virtual dependence of the South Australian forestry industry on a single species necessitates continued research into the maintenance and expansion of *Pinus radiata* resources, as well as into forestry in general.

The Woods and Forests Department maintains its own research facilities and in addition combines with the Commonwealth Forest Research Institute in operating a regional branch of the Institute at Mount Gambier. Certain aspects of forestry research are also undertaken by the Soils Division of the C.S.I.R.O. and the Waite Agricultural Research Institute.

Research activities aimed at an expansion of forestry production include the development of fertilisers, both to stimulate growth and to bring into production land previously considered unsuitable, and the improvement of planting stock through selective breeding. Preventive research is concerned with the extremely important question of soil deterioration and with combating various diseases and pests. Permanent sample plots have been established in departmental forests as an aid to research into various aspects of forest management.

The Woods and Forests Department provides an advisory service in arboriculture and distributes, through the Belair nursery, a wide variety of trees which have been selected for their adaptability to various climatic and soil conditions.

FOREST PROTECTION

The hot dry summer conditions in the State require forest managements to take considerable precautions and to maintain constant vigilance against forest fire. The clearing of undergrowth, the maintenance of fire-breaks, the manning of observation towers and the constant readiness of fire fighting units are all an integral part of forestry practice.

Other protective measures include spraying to prevent the disorder known as 'die-back', exposing land prior to planting to counteract the bark beetle and the eradication of the various weeds and pests which threaten young plants.

Since the discovery of the *Sirex* wood wasp in Victorian forests in 1961 constant watch has been maintained for any sign of this pest in South Australian pine forests.

FISHERIES

The entire coastline of South Australia except for the unpopulated area west of Fowlers Bay, is fished commercially. In the sheltered waters of the gulfs, Kangaroo Island, the Coorong and the West Coast bays, there are net and handline fisheries; in the open off-shore waters tuna, crayfish and shark are sought; and inland in the River Murray a small quantity of fresh water fish is caught each year.

HISTORICAL

The earliest commercial fishing industries were associated with oysters and with net and handline fishing for whiting, snapper and net-fish. Oysters were severely overfished and by 1930 supplies were reduced to such an extent that they were no longer commercially exploited. The fishing for whiting by hand line and the general net fishery have remained operative and have benefited from modern methods of handling, transporting and marketing.

Crayfish were also taken quite early in the State's history but it was not until the establishment in the 1950s of the American market for frozen cray-tails, with its high prices, that production was substantially increased.

Shark fishing in South Australia developed in conjunction with the crayfish industry as the fishing areas were generally similar and the boats easily converted for either type of fishing. The main expansion in shark fishing occurred in the early 1950s when there was a strong demand for shark from Victoria and prices were attractive. Production which reached a maximum in 1957, decreased when the Victorian price fell and the market for shark liver oil collapsed. Recently markets have improved and production has risen substantially.

Early attempts at trawling throughout the State gave poor results except in the Great Australian Bight where several productive grounds were discovered. In an attempt to establish trawling in this area the Commonwealth Government purchased the trawler *Southern Endeavour* and the grounds were fished for a period of eighteen months during 1960 and 1961. Although fish were landed in commercial quantities, financial returns were insufficient to justify continuation of the programme and the vessel was sold. The development of a trawling industry might be possible in the future when techniques and markets improve.

The most recently developed fishery in the State is that of 'live bait pole' fishing for tuna. Production has increased rapidly since the first attempts at tuna fishing in the 1940s, and currently tuna provides half of the total State catch of scale fish.

ADMINISTRATION

Exploitation of the State's fish resources is controlled by two Acts, the State Fisheries Act, 1917-1967 and the Commonwealth *Fisheries Act* 1952-1967. Under the State Act, which is administered by the Fisheries and Fauna Conservation Department, provision is made for the licensing of fishermen, the registration of boats and gear, and the maintenance and improvement of port and harbour facilities. Control of fishing activity is maintained by the establishment of size limits, closed areas and closed seasons, the regulation of net sizes, and the prohibition of the use of explosives or noxious substances.

A light aircraft has been used for the inspection of fishing waters—for example it has been possible to determine and estimate the intensity of crayfishing by counting the number of pots in the water. It is intended to provide two patrol boats to work in co-operation with aircraft by means of two-way radio to enable speedy inspection and interception when required.

The Commonwealth Fisheries Act which complements State legislation and provides for management of resources in extra-territorial waters now extends Australia's territorial fishing limit from three miles to twelve miles; this provision came into force on 30 January 1968.

FISHERMEN AND BOATS

Practically all boats of 50 feet and over are engaged in tuna fishing. During the off season for tuna some are used for salmon, shark or cray fishing. Boats over 20 feet and under 50 feet are engaged in taking shark and crayfish and those under 20 feet are used mainly in net and hand line fisheries. A new method of boat registration adopted by the Department in 1965-66 enables greater detail regarding boat size to be recorded. Figures prior to this period are not however available on a comparable basis. Boats and equipment were valued at \$7,191,971 in 1966-67. The numbers of persons and boats engaged in commercial fishing activities are shown in the following table.

Fishing: Persons and Equipment Engaged, South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
Persons engaged (a)	7,200	8,520	9,300	10,400	12,830
Boats engaged (b)					
Under 20 feet				1,443	1,437
20 feet and under 30				400	400
30 feet and under 40			Not available	99	112
40 feet and under 50				44	52
50 feet and under 60				17	13
60 feet and under 70				6	12
70 feet and over				10	12
Total	1,650	1,636	2,300	2,019	2,038

(a) Includes full-time and part-time licensed fishermen. Full-time fishermen estimated at 2,200 in 1966-67.

(b) Due to increased policing of Fisheries legislation the total number of boats shown from 1964-65 is not strictly comparable with previous years.

PRODUCTION

Marine Fish

Tuna, shark, whiting and salmon are the most important marine species.

Tuna are taken in the waters south of Eyre Peninsula and Kangaroo Island. Occasional catches are taken beyond the continental shelf. Although purse-seining has been attempted the only successful technique to date is pole fishing with live bait. The use of spotting aircraft has increased the efficiency of fishing operations. Most tuna are landed at Port Lincoln although occasional landings have been made at Port Adelaide.

Whiting are taken commercially in Gulf St Vincent, Spencer Gulf, Investigator Strait and the West Coast bays. In many areas hand lining continues to provide profitable catches as this fish attracts a high price. In other areas of the gulfs and the West Coast, netting restrictions have been eased and large quantities of whiting and garfish are netted.

Shark fishing extends from the Victorian border in the east to Fowlers Bay in the far west. The main landing ports are the South East crayfish ports, Port Adelaide, Port Lincoln and Victor Harbor. Most shark are taken by long line but some are taken on hand lines by snapper fishermen.

Australian salmon provides useful off-season fishing for a number of tuna fishermen. The best catches are taken in Spencer Gulf and around Kangaroo Island. Most fish are landed at Port Lincoln for canning. In the South East large quantities of salmon trout are netted for crayfish bait. Of other species garfish, mullo way and snapper are highly regarded as table fish. Mullo way are netted in the Coorong, garfish are netted in the gulfs and West Coast bays and, in season, snapper are taken by hand and long line in most areas of the State.

Fresh Water Fish

Approximately 210 part-time commercial fishermen using drum nets and set lines are engaged in fishing on the River Murray for Murray cod and callop. This is the only commercial source for fresh water fish in the State because of the general lack of permanent streams and lakes. To prevent over-fishing, the river has been sectioned into 'reaches' and 'reserves' and each commercial fisherman is issued with a permit to fish a separate reach.

Production in 1960-61 was valued at \$1,610,000 and by 1965-66 had reached \$2,710,000. The gross values of the major species taken in 1965-66 were:

	\$
Tuna	991,000
Whiting	810,000
Shark	195,000
Garfish	222,000
Snapper	142,000
All other	350,000
	<hr/> 2,710,000 <hr/>

By 1966-67 gross values of major species had increased to \$2,852,000.

The main commercial fish species, together with their production in recent years, are listed in the following table.

PRODUCTION

Fish: Production by Species, South Australia*Estimated Live Weight*

Species	1962-63	1963-64	1964-65	1965-66	1966-67
	'000 Lb				
Marine :					
Australian salmon	885	1,245	1,155	1,405	2,370
Bream	67	54	50	70	35
Garfish	500	620	630	741	1,015
Mullet	550	600	610	505	545
Mulloway	135	141	147	194	359
Ruff	460	475	530	376	835
Shark	2,632	2,397	1,937	2,063	3,770
Snapper	637	579	647	652	936
Snook	410	390	330	282	290
Tuna	7,932	12,085	10,430	13,217	7,521
Whiting	1,875	1,615	1,810	1,800	1,680
Other marine species	425	535	510	425	580
Total	16,508	20,736	18,786	21,731	19,937
Freshwater :					
Golden perch (callop)	500	400	350	250	300
Murray cod	100	75	50	70	90
Total	600	475	400	320	390
Total fish production ..	17,108	21,211	19,186	22,051	20,327

Crustaceans

Crayfish are taken by craypots between the shore and the edge of the continental shelf. The South East coast between Kingston and the Victorian border is the main fishing area. Good catches are also taken from grounds around Kangaroo Island, near the Althorpe Islands and Port Lincoln, and along the West Coast. Since 1964-65 the value of crayfish production has exceeded the value of scale fish species. Early in 1968, regulations were approved by Executive Council to divide South Australia into northern and southern zones with the Murray Mouth as the dividing line. In an attempt to reduce the intensity of cray-fishing and increase the stability of the industry, legislation was passed in 1967 prescribing boat limits and pot limits. This legislation has been introduced for an experimental period ending on 31 May 1969.

Crayfish Production, South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
Estimated gross weight ('000 lb)	4,650	4,325	4,928	6,063	6,249
Value (\$'000)	1,540	1,671	2,833	3,334	3,249

Molluscs

Sources of abalone, an edible sea mollusc, in South Australia were until recently relatively unexplored and early production was largely undertaken by amateurs. The establishment of ready markets overseas for this product has

however encouraged the development of the industry on a commercial basis. At present there are twenty full-time diving units in operation. All divers must hold a professional fishermen's licence.

Originally catches were confined to reef areas near Adelaide, but commercial production is now centred at Wallaroo and Port Lincoln.

It is uncertain whether the stocks of abalone are large enough for any substantial permanent fishing development.

Abalone Production, South Australia

Particulars	1963-64	1964-65	1965-66	1966-67
Gross (in shell) weight ('000 lb)	5	62	58	630
Value (\$'000)	<i>n.a.</i>	<i>n.a.</i>	4	63

n.a.—Not available.

MARKETING AND PROCESSING

Marketing and processing arrangements vary according to the species. Tuna are landed at Port Lincoln and then canned or frozen for export. As Port Lincoln is a deep sea port, few transport problems exist. Large catches of salmon are generally landed and canned at Port Lincoln. Crayfish are tailed and frozen for export at most of the main ports, but some are cooked for local consumption. Shark are gutted and headed at sea and are frozen at the port of landing for interstate markets. Other fish are generally iced for dispatch to the Adelaide market or are scaled, filleted and frozen for general distribution.

Most of the main landing ports have chilling or freezing facilities. Several of these are operated by individual buyers but most are depots of the South Australian Fishermen's Co-operative Limited (Safcol). This is the larger of the State's two fishermen's co-operatives. The other is the Yorke Peninsula Fishermen's Co-operative based at Moonta. In addition to collecting, processing and distributing fish from the out ports, Safcol also operates the Adelaide fish market. This is an auction market which handles fish for both members and non-members.

RESEARCH

In recent years the realisation that research is essential for effective fisheries management has promoted several research programmes. Tuna, crayfish, salmon and shark resources are being investigated by a joint Commonwealth and States group consisting of the Division of Fisheries and Oceanography of the Commonwealth Scientific and Industrial Research Organization, the Fisheries Division of the Commonwealth Department of Primary Industry, and the Fisheries departments of New South Wales, Victoria, Tasmania and South Australia. Research is also being undertaken to determine possible uses for fish stocks which are not at present utilised. In addition, the State Fisheries and Fauna Conservation Department is conducting a whiting research programme. All programmes are directed towards providing a scientific basis for the management of the fisheries concerned.

9.3 MANUFACTURING

DEVELOPMENT

Early factory production was naturally orientated to local needs: thus brick kilns, flour mills, tanneries, distilleries and a candle and soap works were among factories recorded in the 1840s. Also in operation were the smaller establishments of saddlers and coachbuilders, while various food and clothing industries were being established. Heavy industry can probably be traced to the production of agricultural machinery, beginning with the stripper of 1843 and including the stump-jump plough of 1876.

The discovery of copper in 1843, together with later discoveries, provided an impetus to certain industrial pursuits. However, the finding of gold in Victoria in 1851 led to an exodus of skilled personnel from which the Colony's infant industries were not fully to recover for some two decades.

A highlight in the industrial progress of the State was the establishment at Port Pirie in 1889 of smelters for the processing of silver-lead ore from Broken Hill. This was primarily responsible for building up Port Pirie's population from about 900 at the 1881 Census to some 8,000 twenty years later, making the town at that time the largest country centre in South Australia.

There had been customs tariffs from very early days, but it was not until the 1880s that they reached a level offering protection to secondary industries. Further stimulus was provided in 1901 when the establishing of the Commonwealth provided for free trade between the States and the erection of a common tariff barrier. After the 1914-18 War manufacturing industry again expanded with the assistance of still higher tariffs.

In the following table various measures of industrial development have been recorded for the period since the 1914-18 War.

Factory Development, South Australia

Period	Factories	Persons Employed (a)	Motive Power (b)	Value of Land, Buildings, Plant and Machinery	Value of Production
	No.	No.	Horsepower	\$'000	\$'000
Five year average					
1920-21 to 1924-25	1,578	33,382	83,887	11,415	9,789
1925-26 to 1929-30	1,823	37,617	149,891	35,816	25,344
1930-31 to 1934-35	1,710	27,409	184,797	35,206	16,308
1935-36 to 1939-40	2,025	42,337	266,051	36,680	26,338
1940-41 to 1944-45	2,172	64,778	358,940	66,218	50,210
1945-46 to 1949-50	2,788	72,302	467,009	83,876	76,564
1950-51 to 1954-55	3,410	84,490	638,220	144,164	180,598
1955-56 to 1959-60	4,211	94,045	903,699	282,584	273,508
1960-61 to 1964-65	5,608	106,262	1,370,915	512,841	398,608
Year					
1961-62	5,519	99,094	1,296,507	449,600	347,828
1962-63	5,766	105,265	1,317,292	506,571	379,142
1963-64	5,826	110,813	1,456,332	560,908	427,356
1964-65	5,887	116,183	1,598,920	645,469	498,588
1965-66	6,065	118,343	1,652,839	699,989	527,477

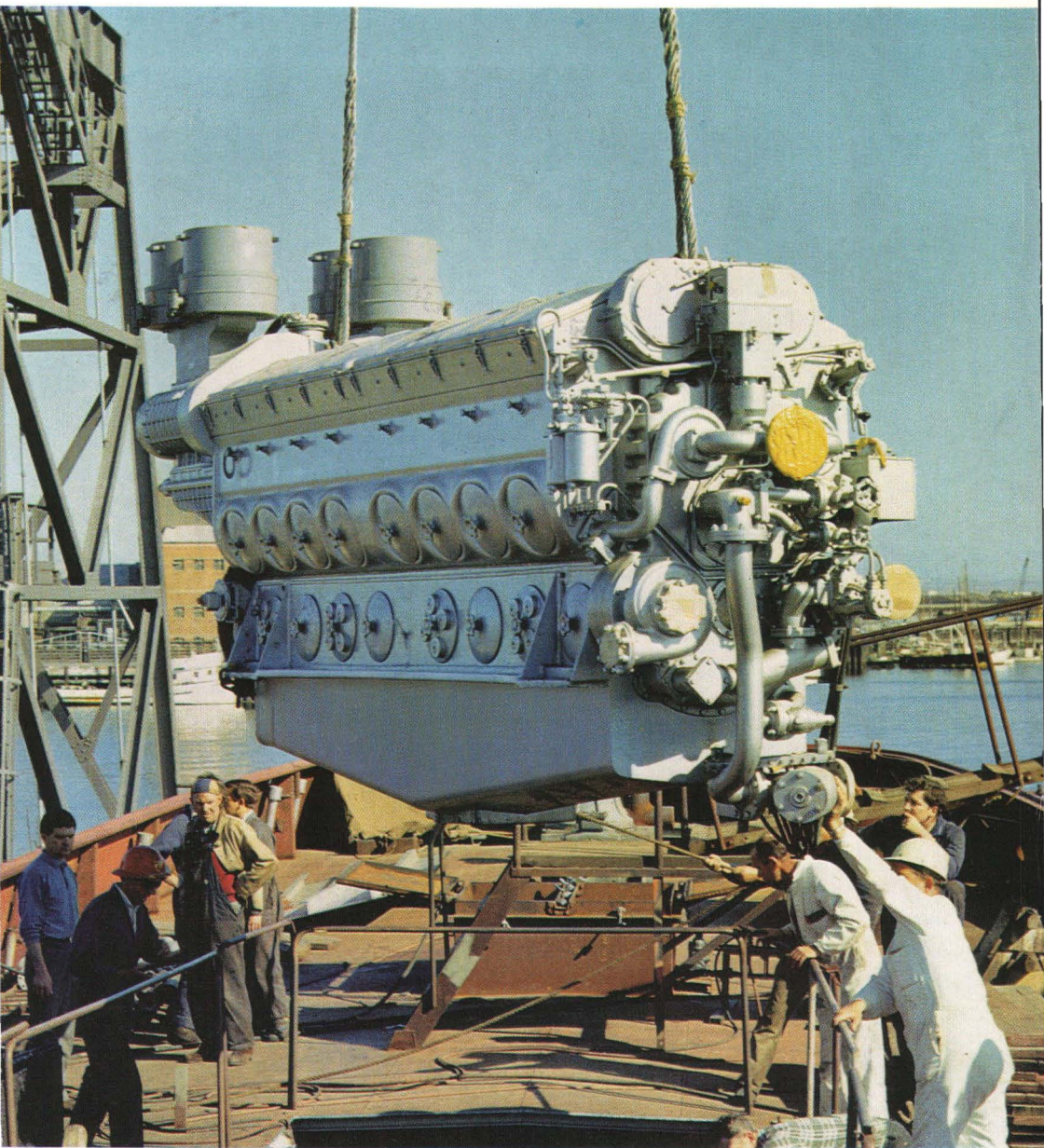
(a) Average employment for whole year ; includes working proprietors.

(b) Rated horsepower of engines ordinarily in use. From 1940-41 excludes motors driven by electricity of own generation, to avoid duplication.



Australian Fisheries Newsletter

Green-lipped abalone (*Schismatic laevigata*) which is gathered in South Australian waters.



General Motors-Holdens Pty Ltd

A marine diesel engine being installed at a ship-building yard at Port Adelaide.

Despite certain industrial growth, South Australia in the 1930s was still basically a primary producing State. It is over the last thirty years that a really rapid growth in the relative contribution of secondary industry to total production has taken place. Development in the 1930s coincided with Government action which reduced company taxation and wharfage charges, and provided for a programme of low-cost housing. The needs of war provided a further stimulus to the industrialisation process during the 1940s; it is since the war, however, that the most impressive development has taken place.

THE CONTENT OF FACTORY STATISTICS

The period covered by the statistics is generally the twelve months ended 30 June. In cases where some other accounting period is used, returns may be obtained for that accounting period. These cases, however, are comparatively few, and their inclusion in no way impairs the comparability of the statistics in the year under review or from year to year. In preparing the statistics the following definitions have been applied.

Factory. For the purposes of the accompanying statistics a factory is defined as an establishment in which four or more persons are employed or where power-driven machinery is used in manufacturing, repairing, or assembling. It should be noted that the details relating to small establishments not classified for statistical purposes as factories are not included in the figures shown herein. Also excluded are the activities of the Commonwealth Department of Supply and the various private firms working within the Weapons Research Establishment at Salisbury and at the testing range at Woomera.

If a manufacturing business is conducted in conjunction with any other activity, particulars relating to the manufacturing section only are included in the statistics.

Average Number of Persons Employed. All persons employed in the manufacturing activities of a factory are counted as factory employees. The figures relating to employment, therefore, exclude all those engaged in selling and distribution, such as salesmen, travellers, collectors, carters engaged solely on outward delivery of manufactured goods, and retailing storemen. The figures, however, include proprietors who work in their own businesses and 'out-workers'.

The average number of persons employed is quoted on two different bases: the average during the period of operation and the average over the whole year. Of these, the former is simply the aggregate of the average number of persons employed in each factory during its period of operation (whether the whole or only part of the year); this average is used only in respect of details relating to classification according to number of persons employed. The latter, which is used in all other instances, is calculated by reducing the average number working in the factories (irrespective of period of operation) to the equivalent number working for a full year.

Working proprietors are included in all employment figures other than those relating to age dissections, but in all cases drawings by working proprietors are excluded from salaries and wages paid.

Value of Premises and Machinery. The values shown include an allowance for rent capitalised where premises and machinery are not owned by the occupiers.

Costs of Production. This item includes the value, in the usual sense, of materials used, stores used, containers, tools replaced, materials used in repairs to plant, and the cost of power, light, lubricants and water used. In general, it does not include the value of customers' articles or materials repaired, assembled, or treated by the factory.

Value of Output. The value of factory output is the value of the goods manufactured or their value after passing through the particular process of manufacture and includes the amount received for repair work, work done on commission, and receipts for other factory work. The basis of valuation of the output is the selling value of the goods at the factory exclusive of all delivery costs and charges and excise duties but inclusive of bounty, and subsidy payments to the manufacturer of the finished article.

Value of Production. The value of production is the value added to raw materials by the process of manufacture. It is calculated by deducting from the value of factory output the value (at the factory) of materials, containers, packing, power, fuel, and light used, tools replaced, and materials used in repairs to plant (but not depreciation charges).

In the process of manufacture many goods are treated in several industries, the output of one becoming the raw materials of another, so that such commodities are counted more than once in the aggregate value of output and of raw materials. On the other hand the aggregate value of production is assessed without duplication, the value added by each industry being taken into account once only. For this reason the value of production, and not the value of output is usually the more useful measure of activity.

There are many miscellaneous expenses, such as maintenance of buildings, depreciation, workers compensation insurance, other insurances, pay-roll tax, income tax, advertising, interest on borrowed money, bad debts, and many other sundry charges, which are not taken into account. Consequently it must not be inferred that when wages and salaries are deducted from value of production the whole of the surplus is available for interest and profits.

THE CLASSIFICATION OF FACTORIES

In a number of tables in this section factories are classified by the nature of their output into sixteen major classes. These classes, together with sub-classes for which factories are operating in this State, are shown in the following list.

Where the nature of goods produced would place the factory in more than one sub-class and where its activities cannot be thus separated it is classified according to its predominant activity.

Classification of Factories

Class 1— <i>Treatment of non-metalliferous mine and quarry products.</i>	Other cement goods.
Lime, plaster of paris, asphalt.	Other.
Fibrous plaster and products.	Class 2— <i>Bricks, pottery, glass, etc.</i>
Marble, slate, etc.	Bricks and tiles.
Cement, portland.	Earthenware, china, porcelain, terracotta.
Asbestos cement sheets and mouldings.	Glass (other than bottles).
	Glass bottles.

Class 3—*Chemicals, dyes, explosives, paints, oils, grease.*

Industrial and heavy chemicals and acids.

Pharmaceutical and toilet preparations.

Explosives (including fireworks).

White lead, paints, varnish.

Oils, vegetable.

Oils, mineral.

Boiling-down, tallow-refining.

Soap and candles.

Chemical fertilisers.

Inks, polishes, etc.

Class 4—*Industrial metals, machines, conveyances.*

Smelting, converting, refining, rolling of iron and steel.

Foundries (ferrous).

Plant, equipment and machinery, including machine tools.

Other engineering.

Extracting and refining of other metals, alloys.

Electrical machinery, cables, and apparatus.

Construction and repair of vehicles:

Tramcars and railway rollingstock.

Motor vehicles:

Construction and assembly.

Repairs.

Motor bodies.

Horse-drawn vehicles.

Motor accessories.

Aircraft.

Cycles (foot and hand driven) and accessories.

Ship and boat building and repairing.

Cutlery and small hand tools.

Agricultural machines and implements.

Non-ferrous metals:

Rolling and extrusion.

Founding, casting, etc.

Sheet metal working pressing, stamping.

Pipes, tubes, and fittings: Ferrous.

Wire and wireworking (including nails).

Stoves, ovens and ranges.

Gas fittings and meters.

Sewing machines.

Arms, ammunition (excluding explosives).

Wireless and amplifying apparatus.

Other metal works.

Class 5—*Precious metals, jewellery, plate.*

Jewellery.

Watches and clocks (including repairs).

Electroplating (gold, silver, chromium, etc.).

Class 6—*Textile and textile goods (not dress).*

Cotton spinning and weaving.

Wool carding, spinning, weaving.

Hosiery and other knitted goods.

Rope and cordage.

Canvas goods, tents, tarpaulins, etc.

Bags and sacks.

Textile dyeing, printing, and finishing.

Other.

Class 7—*Skins and leather (not clothing or footwear).*

Furriers and fur-dressing.

Woolscouring and fellmongering.

Tanning, currying and leather-dressing.

Saddlery, harness and whips.

Bags, trunks, and other goods of leather and leather substitutes.

Class 8—*Clothing (except knitted).*

Tailoring and ready-made clothing.

Waterproof and oilskin clothing.

Dressmaking, hemstitching.

Millinery.

Shirts, collars, underclothing.

Handkerchiefs, ties, scarves.

Gloves.

Boots and shoes (not rubber).

Boot and shoe repairing.

Boot and shoe accessories.

Umbrellas and walking sticks.

Dyeworks and cleaning (including renovating and repairing).

Other.

Class 9—*Food, drink and tobacco.*

Flour milling.

Cereal foods and starch.

Animal and bird foods.

Chaff cutting.

Bakeries (including cakes and pastry).

Biscuits.

Class 9—(*continued*)

Sugar refining.
 Confectionery (including chocolate and icing sugar).
 Jam, fruit and vegetable canning.
 Pickles, sauces, vinegar.
 Bacon curing.
 Butter factories.
 Cheese factories.
 Margarine.
 Meat and fish preserving.
 Condiments, coffee, spices.
 Ice and refrigerating.
 Salt.
 Aerated waters, cordials, etc.
 Breweries.
 Distilleries.
 Winemaking.
 Malting.
 Bottling.
 Dehydrated fruit and vegetables.
 Ice cream.
 Sausage skins.
 Other.

Class 10—*Sawmills, joinery, boxes, etc., wood turning and carving.*

Sawmills.
 Plywood mills (including veneers).
 Joinery.
 Cooperage.
 Boxes and cases.
 Woodturning, woodcarving, etc.
 Basketware and wickerware (including seagrass and bamboo furniture).
 Perambulators (including pushers and strollers).
 Wall and ceiling boards (not plaster or cement).
 Other.

Class 11—*Furniture of wood, bedding, etc.*

Cabinet and furniture making (including billiard tables and upholstery).

Bedding and mattresses (not wire).
 Furnishing drapery.
 Picture frames.
 Blinds.

Class 12—*Paper, stationery, printing, bookbinding, etc.*

Newspapers and periodicals.
 Printing, Government.
 Printing, general (including book-binding).
 Manufactured stationery.
 Process and photo-engraving.
 Cardboard boxes, cartons, and containers.
 Paper bags.
 Paper making.
 Other.

Class 13—*Rubber.*

Rubber goods (including tyres made).
 Tyre retreading and repairing.

Class 14—*Musical instruments.*

Gramophone and gramophone records.
 Pianos, piano-players, organs.
 Other.

Class 15—*Miscellaneous products.*

Plastic moulding and products.
 Brooms and brushes.
 Optical instruments and appliances.
 Surgical and other scientific instruments and appliances.
 Photographic material (including developing and printing).
 Toys, games and sports requisites.
 Other.

Class 16—*Heat, light and power.*

Electric light and power:
 Government.
 Local authority.
 Other.
 Gasworks:
 Other.

LEGISLATION

Industrial legislation is dealt with in Part 7, Labour. Other legislation is concerned with the location of factory premises and with the processes carried out therein.

Under the Local Government Act, 1934-1967 local government authorities may make by-laws restricting the erection of factory premises to certain sections of the area under their jurisdiction. The Manufacturing Industries Protection Act, 1937 provides for the proclamation of certain areas wherein proprietors and occupiers of factories are protected against civil action for noise and vibration problems. This Act, which takes precedence over zoning by-laws, currently applies to four relatively small zones. Regulations made under the Noxious Trade Act, 1943-1965 have defined certain processes as noxious trades for which a licence must be obtained. In addition an area between Wingfield and Dry Creek in the outer northern suburbs has been declared a noxious trade area with persons operating therein being protected from civil action.

Similarly the licensing of noisy trades may be required under a section of the Local Government Act. Protection against health hazards is provided under the Health Act, 1935-1966.

THE STRUCTURE AND LOCATION OF SECONDARY INDUSTRY

Post-war industrialisation has to a considerable extent evolved around three major industrial groups. The motor vehicle, the electrical goods and the household appliance industries, together with their peripheral suppliers of components and services, have accounted for much of the post-war expansion. These industries are located in, or near Adelaide. In fact the tendency for manufacturing industries, particularly those supplying consumer goods, to congregate near their market has resulted in a heavy concentration of South Australian secondary industries in or near Adelaide.

In the next table some details of factory activity are given for the Metropolitan Area (as defined for Census purposes prior to 30 June 1966) and for the Remainder of the State. Included in the latter category are some large industrial plants close to Adelaide, particularly the oil refinery at Port Stanvac and the motor vehicle works at Elizabeth.

Factory Activity, Adelaide Metropolitan Area^(a) and Remainder of State

Year	Factories	Persons Employed (b)	Value of Land and Buildings	Value of Plant and Machinery	Value of Output	Value of Production
	No.	No.	\$'000	\$'000	\$'000	\$'000
METROPOLITAN AREA						
1961-62	3,437	75,529	133,468	132,568	595,321	269,034
1962-63	3,599	80,606	145,940	144,599	686,154	296,835
1963-64	3,662	82,896	157,838	149,112	756,790	326,123
1964-65	3,689	85,910	171,293	161,179	814,116	360,349
1965-66	3,832	87,047	183,435	167,527	846,709	374,132
REMAINDER OF STATE						
1961-62	2,082	23,565	63,127	120,438	208,274	78,794
1962-63	2,167	24,659	67,024	149,009	227,920	82,307
1963-64	2,164	27,917	72,790	181,168	304,996	101,233
1964-65	2,198	30,273	85,244	227,753	392,714	138,239
1965-66	2,233	31,296	93,096	255,931	423,830	153,345

(a) As defined for Census purposes prior to 30 June 1966.

(b) Average over whole year; includes working proprietors.

Generally industrial plants outside the metropolitan area are orientated to sources of supply, exceptions being the production of agricultural machinery at Mannum and the presence of woollen mills at Lobethal and Mount Gambier. Wallaroo and Port Lincoln, being central to their markets, are the sites of chemical fertiliser production.

The two most important undertakings beyond the vicinity of Adelaide are the iron and steel complex at Whyalla and the lead smelters at Port Pirie. These undertakings together with the power station at Port Augusta are sited for important mineral sources. Other factories are located near sources of primary products and include the sawmills and paper pulp industries of the South East, the fruit processing plants of the Upper Murray, the wineries and distilleries of the Barossa Valley and the Murray, and various dairy product factories and fish processing plants.

In the following table details of factories for 1965-66 are classified according to industrial class. The dominating position of class 4 which includes the industrial metals treatment, motor vehicles, electrical, and consumer durable industries referred to above, can be clearly seen.

Factories by Class of Industry, South Australia, 1965-66

Industrial Class	Factories	Persons Employed (a)	Value of Premises and Equipment	Salaries and Wages Paid (b)	Other Costs of Production	Value of Production
	No.	No.	\$'000	\$'000	\$'000	\$'000
1. Treatment of non-metalliferous mine and quarry products	206	2,321	26,903	6,132	21,672	17,807
2. Bricks, pottery, glass, etc.	73	2,277	13,929	5,956	8,284	11,115
3. Chemicals, dyes, explosives, paints, oils, grease	106	3,296	45,580	9,296	61,824	35,263
4. Industrial metals, machines, conveyances	3,051	69,592	353,700	175,123	407,748	294,482
5. Precious metals, jewellery, plate	171	549	1,831	907	932	1,807
6. Textile and textile goods (not dress) ..	60	2,807	8,980	5,597	11,741	9,796
7. Skins and leather (not clothing or footwear)	40	1,015	2,453	2,459	10,690	3,954
8. Clothing (except knitted)	539	5,397	10,966	7,973	9,244	12,965
9. Food, drink and tobacco	743	12,324	65,260	26,246	119,444	55,691
10. Sawmills, joinery, boxes, etc., wood turning and carving	451	5,934	19,752	12,300	29,519	23,012
11. Furniture of wood, bedding, etc.	211	2,301	5,549	4,148	8,759	7,696
12. Paper, stationery, printing, book-binding, etc.	192	5,452	41,556	13,335	23,736	25,939
13. Rubber	58	1,515	10,999	4,419	8,586	6,996
14. Musical instruments	10	30	140	45	20	79
15. Miscellaneous	120	1,769	5,359	3,557	6,330	7,189
Total classes 1-15	6,031	116,579	612,957	277,494	728,530	513,791
16. Heat, light and power	34	1,764	87,032	5,457	14,531	13,687
Total all classes	6,065	118,343	699,989	282,951	743,062	527,477

(a) Average employment for whole year; includes working proprietors.

(b) Excludes drawings by working proprietors.

The 'Industrial metals, machines, conveyances' class accounted for 56 per cent of total production and 59 per cent of employment: the next highest class, viz 'Food, drink and tobacco' represented 11 per cent and 12 per cent respectively.

The following table records the number of factories in each industrial class for recent years.

Number of Factories by Class of Industry, South Australia

Industrial Class	1961-62	1962-63	1963-64	1964-65	1965-66
1. Treatment of non-metalliferous mine and quarry products	185	182	192	194	206
2. Bricks, pottery, glass, etc.	76	80	76	78	73
3. Chemicals, dyes, explosives, paints, oils, grease	95	97	100	104	106
4. Industrial metals, machines, conveyances	2,545	2,781	2,841	2,889	3,051
5. Precious metals, jewellery, plate ...	164	169	174	171	171
6. Textile and textile goods (not dress)	59	58	57	58	60
7. Skins and leather (not clothing or footwear)	41	40	38	36	40
8. Clothing (except knitted)	591	594	573	555	539
9. Food, drink and tobacco	756	744	737	755	743
10. Sawmills, joinery, boxes, etc., wood turning and carving	406	409	413	436	451
11. Furniture of wood, bedding, etc. ...	220	218	221	201	211
12. Paper, stationery, printing, book-binding, etc.	190	197	193	194	192
13. Rubber	62	57	59	59	58
14. Musical instruments	11	11	11	11	10
15. Miscellaneous	81	96	108	115	120
Total classes 1-15	5,482	5,733	5,793	5,856	6,031
16. Heat, light and power	37	33	33	31	34
Total all classes	5,519	5,766	5,826	5,887	6,065

Although there were 6,065 factories operating in 1965-66, only 169 or 3 per cent had an average employment in excess of 100 persons while 4,560 factories, or 75 per cent of the total employed ten persons or less. In the following table factories are grouped according to the average number of persons employed during the period of operation. The top section of the table shows the number of factories in each size grouping, and the lower section the number of persons employed in the factories located in the groups. Where a manufacturer operates at more than one location each factory premises is recorded separately.

Number of Factories and Persons Employed by Size of Factory, South Australia

Year	Size of Factory (i.e. Average Employment)							Total
	Under 5	5-10	11-20	21-50	51-100	101-500	Over 500	
NUMBER OF FACTORIES								
1961-62	3,010	1,174	589	434	169	120	23	5,519
1962-63	3,165	1,228	621	429	171	127	25	5,766
1963-64	3,143	1,259	636	446	184	130	28	5,826
1964-65	3,205	1,218	650	462	186	138	28	5,887
1965-66	3,380	1,180	681	464	191	142	27	6,065
PERSONS EMPLOYED								
1961-62	6,504	8,125	8,611	13,864	11,866	23,396	27,228	99,594
1962-63	6,810	8,531	9,149	13,739	11,819	24,949	30,765	105,762
1963-64	6,772	8,693	9,338	14,062	12,692	25,512	34,079	111,148
1964-65	6,810	8,411	9,557	14,658	13,024	27,344	36,971	116,775
1965-66	6,931	8,116	9,965	14,959	13,437	28,950	36,390	118,748

In 1965-66 the twenty-seven largest firms were responsible for 31 per cent of total factory employment. By contrast the 3,380 factories employing less than five persons, while constituting 56 per cent of total factories, accounted for only 6 per cent of employment, including a considerable proportion of working proprietors.

Factories operating during 1965-66 are classified by size of establishment for each industrial class in the next table.

**Factories by Persons Employed, South Australia
1965-66**

Industrial Class	Average Employment							Total
	Under 5	5-10	11-20	21-50	51-100	101-500	Over 500	
1. Treatment of non-metalliferous mine and quarry products	112	52	15	16	7	4	—	206
2. Bricks, pottery, glass, etc.	20	16	12	12	10	3	—	73
3. Chemicals, dyes, explosives, paints, oils, grease	49	21	8	13	5	9	1	106
4. Industrial metals, machines, conveyances	1,815	573	319	179	79	66	20	3,051
5. Precious metals, jewellery, plate . .	141	22	5	3	—	—	—	171
6. Textile and textile goods (not dress)	21	14	6	9	5	4	1	60
7. Skins and leather (not clothing or footwear)	19	9	5	2	3	1	1	40
8. Clothing (except knitted)	344	87	49	39	12	8	—	539
9. Food, drink and tobacco	324	166	111	84	39	19	—	743
10. Sawmills, joinery, boxes etc., wood turning and carving	240	88	61	41	11	10	—	451
11. Furniture of wood, bedding, etc. . .	116	38	27	25	2	3	—	211
12. Paper, stationery, printing, book-binding, etc.	50	56	37	29	11	8	1	192
13. Rubber	34	12	5	3	1	2	1	58
14. Musical instruments	8	2	—	—	—	—	—	10
15. Miscellaneous	64	20	20	8	5	3	—	120
Total classes 1-15	3,357	1,176	680	463	190	140	25	6,031
16. Heat, light and power	23	4	1	1	1	2	2	34
Total all classes	3,380	1,180	681	464	191	142	27	6,065

In 1965-66 factories employing less than five persons included 1,057 motor repair workshops, 210 motor body workshops, 170 bakeries, 147 boot and shoe repairers and 184 joineries.

EMPLOYMENT IN FACTORIES

In 1931-32, at the height of the depression, average factory employment in South Australia was 23,830. By 1938-39 it had passed the previous peak of 41,075 reached in 1926-27 and stood at 43,371. There was a rapid increase in the factory work force in the early war years and a new peak of 72,751 was reached in 1942-43, after which it declined for the remaining war years. Since the war the employment level has shown an increase in all but three years to reach the level of 118,343 recorded in 1965-66.

The factory work force in 1965-66 represented 11.0 per cent of the total population compared with 10.0 per cent in 1945-46 and 7.3 per cent in 1938-39. Details of factory employment for each year since 1911 are given in the Statistical Summary on page 580.

A breakdown of the factory work force by sex and age is given in the following table for five selected post-war years and for 1939. The most noticeable variation in composition is the considerable drop in the relative contribution of persons under twenty-one years to the total force between 1939 and the early post-war years.

Factory Employees by Age and Sex, South Australia
(Excludes working proprietors)

At 30 June	Males			Females			Total Employees
	Under 21 Years	21 Years and Over	Total	Under 21 Years	21 Years and Over	Total	
	NUMBER OF EMPLOYEES						
1939.....	7,146	25,672	32,818	4,140	3,657	7,797	40,615
1950.....	5,850	57,909	63,759	4,049	11,357	15,406	79,165
1955.....	6,338	65,532	71,870	3,951	11,573	15,524	87,394
1960.....	7,989	71,567	79,556	4,722	12,935	17,657	97,213
1965.....	10,671	82,621	93,292	6,183	15,065	21,248	114,540
1966.....	10,958	81,094	92,052	5,847	15,259	21,106	113,158
	PERCENTAGE OF TOTAL EMPLOYEES						
1939.....	17.6	63.2	80.8	10.2	9.0	19.2	100.0
1950.....	7.4	73.1	80.5	5.1	14.4	19.5	100.0
1955.....	7.2	75.0	82.2	4.5	13.3	17.8	100.0
1960.....	8.2	73.6	81.8	4.9	13.3	18.2	100.0
1965.....	9.3	72.2	81.5	5.4	13.1	18.5	100.0
1966.....	9.7	71.7	81.4	5.2	13.4	18.6	100.0

Although the trend in total factory employment in the post-war period has been that of a steady increase, employment trends in individual industries have varied considerably. In the following table factory employment over the last five years is classified by industrial class. Class 4, which includes the motor vehicle, electrical goods and household appliance industries, has accounted for 75 per cent of the post-war increase in factory employment. In the six years immediately after the war, employment in this class increased 23 per cent and in the six years to 1965-66 has increased 25 per cent. Employment in Class 1, which includes the portland cement industry and the production of other materials consumed in the post-war building boom, increased 122 per cent between 1946-47 and 1965-66; other industrial classes have recorded lesser rates of growth.

Factory Employment, South Australia
Average number of persons employed during the year

Industrial Class	1961-62	1962-63	1963-64	1964-65	1965-66
1. Treatment of non-metalliferous mine and quarry products	2,173	2,282	2,325	2,382	2,321
2. Bricks, pottery, glass, etc.	2,124	2,225	2,203	2,264	2,277
3. Chemicals, dyes, explosives, paints, oils, grease.	2,942	2,944	3,215	3,244	3,296
4. Industrial metals, machines, conveyances	55,245	60,470	64,479	68,516	69,592
5. Precious metals, jewellery, plate	536	539	571	562	549
6. Textile and textile goods (not dress)	2,520	2,533	2,522	2,685	2,807
7. Skins and leather (not clothing or footwear)	1,133	1,164	1,203	1,035	1,015
8. Clothing (except knitted)	5,023	5,098	5,312	5,471	5,397
9. Food, drink and tobacco	11,362	11,241	11,614	11,914	12,324
10. Sawmills, joinery, boxes, etc., wood turning and carving	5,256	5,311	5,457	5,791	5,934
11. Furniture of wood, bedding, etc.	2,069	2,191	2,332	2,226	2,301
12. Paper, stationery, printing, bookbinding, etc.	4,698	4,868	4,986	5,178	5,452
13. Rubber	1,074	1,148	1,248	1,328	1,515
14. Musical instruments	37	32	32	34	30
15. Miscellaneous	1,012	1,256	1,381	1,621	1,769
Total classes 1-15	97,204	103,302	108,880	114,251	116,579
16. Heat, light and power	1,890	1,963	1,933	1,932	1,764
Total all classes	99,094	105,265	110,813	116,183	118,343

By contrast employment in Classes 7 and 8 has declined in the post-war era, and in Class 6 it has been steady except for three years in the early 1950s when activity in cotton spinning and weaving was curtailed.

Further details of persons employed in factories during 1965-66 are given in the following table. In that year females constituted 18.6 per cent of the total work force, but industries traditionally associated with female employment had a much higher component, as was the case of Class 8 where females constituted 66.6 per cent of the work force, and Classes 6 and 9 with 53.9 per cent and 33.9 per cent respectively.

Factory Employees by Nature of Employment, South Australia

Average number of persons employed during 1965-66

Industrial Class	Working Proprietors	Managerial and Clerical Staff	Technical Staff (a)	All Other	Total Employees		
					Males	Females	Persons
1. Treatment of non-metalliferous mine and quarry products	84	414	58	1,765	2,178	143	2,321
2. Bricks, pottery, glass, etc.	24	304	11	1,938	2,070	207	2,277
3. Chemicals, dyes, explosives, paints, oils, grease	35	605	185	2,471	2,775	521	3,296
4. Industrial metals, machines, conveyances	1,996	9,019	1,749	56,828	61,244	8,348	69,592
5. Precious metals, jewellery, plate ..	155	65	—	329	478	71	549
6. Textile and textile goods (not dress)	38	228	21	2,520	1,294	1,513	2,807
7. Skins and leather (not clothing or footwear)	29	132	15	839	876	139	1,015
8. Clothing (except knitted)	451	383	2	4,561	1,804	3,593	5,397
9. Food, drink and tobacco	468	1,858	171	9,827	8,149	4,175	12,324
10. Sawmills, joinery, boxes, etc., wood turning and carving	304	706	16	4,908	5,477	457	5,934
11. Furniture of wood, bedding, etc. .	172	214	1	1,914	1,770	531	2,301
12. Paper, stationery, printing, book-binding, etc.	125	962	27	4,338	4,029	1,423	5,452
13. Rubber	7	285	31	1,192	1,257	258	1,515
14. Musical instruments	6	3	—	21	27	3	30
15. Miscellaneous	74	248	22	1,425	1,031	738	1,769
Total classes 1-15	3,968	15,426	2,309	94,876	94,459	22,120	116,579
16. Heat, light and power	6	105	22	1,631	1,735	29	1,764
Total all classes	3,974	15,531	2,331	96,507	96,194	22,149	118,343

(a) Chemists, draftsmen, and other laboratory and research staff.

A relatively greater number of working proprietors are naturally found in classes which embrace the smaller manufacturing unit. For example, of the 3,974 working proprietors shown for 1965-66, 1,342 operated motor repair and motor body workshops, while others were associated with engineering workshops, bakeries, joineries, cabinet-making, printing, tailoring, shoe repairing, upholstery, and the jewellery trade.

SALARIES, WAGES, AND OTHER COSTS

The following table shows aggregate and average wages and salaries paid over the last ten years. Working proprietors and their drawings have been excluded.

In 1946-47, the average of wages and salaries per employee was \$597; however, this figure had doubled by 1951-52 when it stood at \$1,313, and by 1965-66 had

reached \$2,474, over four times the 1946-47 rate. A comparison of the male and female rates shows little variation over the period with the female rate being 52 per cent of the male rate for 1965-66.

Factories: Salaries and Wages Paid, South Australia

Year	Salaries and Wages Paid			Average Per Employee		
	Males	Females	Persons	Males	Females	Persons
	\$'000	\$'000	\$'000	\$	\$	\$
1956-57	139,289	16,348	155,637	1,907	1,015	1,746
1957-58	142,305	17,385	159,689	1,941	1,073	1,784
1958-59	148,536	17,754	166,290	1,985	1,087	1,824
1959-60	170,666	19,809	190,475	2,176	1,151	1,992
1960-61	177,245	20,720	197,965	2,250	1,184	2,057
1961-62	178,771	20,291	199,062	2,281	1,220	2,095
1962-63	197,821	22,246	220,067	2,377	1,240	2,175
1963-64	215,127	25,188	240,315	2,457	1,312	2,251
1964-65	245,566	28,659	274,225	2,689	1,372	2,444
1965-66	252,260	30,691	282,951	2,720	1,420	2,474

Salaries and wages paid to the factory work force during 1965-66 are shown separately for each industrial class in the next table.

Factories: Salaries and Wages Paid^(a), South Australia 1965-66

Industrial Class	Salaries and Wages Paid			Average per Employee		
	Males	Females	Persons	Males	Females	Persons
	\$'000	\$'000	\$'000	\$	\$	\$
1. Treatment of non-metalliferous mine and quarry products	5,930	202	6,132	2,824	1,472	2,741
2. Bricks, pottery, glass, etc.	5,609	347	5,956	2,739	1,695	2,644
3. Chemicals, dyes, explosives, paints, oils, grease	8,535	761	9,296	3,108	1,477	2,851
4. Industrial metals, machines, conveyances	162,894	12,228	175,123	2,741	1,497	2,591
5. Precious metals, jewellery, plate	822	85	907	2,483	1,352	2,302
6. Textile and textile goods (not dress) ..	3,511	2,086	5,597	2,765	1,392	2,021
7. Skins and leather (not clothing or footwear)	2,286	172	2,459	2,680	1,297	2,494
8. Clothing (except knitted)	3,486	4,489	7,975	2,346	1,297	1,612
9. Food, drink and tobacco	20,515	5,731	26,246	2,636	1,407	2,214
10. Sawmills, joinery, boxes, etc., wood turning and carving	11,729	571	12,300	2,261	1,290	2,185
11. Furniture of wood, bedding, etc.	3,498	650	4,148	2,159	1,276	1,948
12. Paper, stationery, printing, book-binding, etc.	11,475	1,860	13,335	2,922	1,328	2,503
13. Rubber	3,957	462	4,419	3,163	1,798	2,930
14. Musical instruments	43	3	45	2,041	833	1,890
15. Miscellaneous	2,554	1,003	3,557	2,622	1,392	2,099
Total classes 1-15	246,844	30,650	277,494	2,712	1,420	2,464
16. Heat, light and power	5,416	41	5,457	3,132	1,417	3,104
Total all classes	252,260	30,691	282,951	2,720	1,420	2,474

(a) Excludes drawings by working proprietors.

Other major production costs for 1965-66 are listed in the following table.

**Factories: Cost of Materials, Fuel, Light, Etc., Used, South Australia
1965-66**

Industrial Class	Materials Used	Non- returnable Con- tainers, Etc.	Tools Replaced, Repairs, Etc.	Power, Fuel, Light, Lubricat- ing Oil and Water	Total
	\$'000				
1. Treatment of non-metalliferous mine and quarry products	17,244	584	1,396	2,448	21,672
2. Bricks, pottery, glass, etc.	5,539	57	900	1,788	8,284
3. Chemicals, dyes, explosives, paints, oils, grease.	51,529	4,242	1,829	4,224	61,824
4. Industrial metals, machines, conveyances	373,236	3,017	13,576	17,918	407,748
5. Precious metals, jewellery, plate	802	4	27	99	932
6. Textile and textile goods (not dress)	10,589	271	431	450	11,741
7. Skins and leather (not clothing or footwear)	9,907	44	476	264	10,690
8. Clothing (except knitted)	8,471	201	252	319	9,244
9. Food, drink and tobacco	96,290	17,284	2,655	3,216	119,444
10. Sawmills, joinery, boxes, etc., wood turning and carving	27,638	139	884	858	29,519
11. Furniture of wood, bedding, etc.	8,408	18	225	108	8,759
12. Paper, stationery, printing, bookbinding, etc.	21,036	199	997	1,505	23,736
13. Rubber	7,543	109	434	501	8,586
14. Musical instruments	18	—	1	1	20
15. Miscellaneous	5,667	280	159	224	6,330
Total classes 1-15	643,916	26,449	24,242	33,923	728,530
16. Heat, light and power	3,395	—	994	10,143	14,531
Total all classes	647,311	26,449	25,236	44,066	743,062

The following table reflects the changing pattern of fuel usage in factories in recent years. The values of coal and wood used have remained relatively stable, however those for gas, fuel oils, electricity and coke have increased by 85 per cent, 68 per cent, 58 per cent and 29 per cent respectively during the period from 1961-62 to 1965-66.

Fuel^(a) and Power Used in Factories, South Australia

Fuel	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Coal	9,559	9,374	9,428	9,543	9,008
Coke	5,206	4,890	4,570	4,895	6,691
Wood	718	728	747	648	582
Fuel oils (b)	6,281	6,617	7,788	9,246	10,575
Gas	524	595	650	703	967
Electricity	8,751	9,970	11,212	12,555	13,794

(a) Includes value of coal and oil used as materials.

(b) Includes tar fuel.

The contribution of the various specified costs of production to the total value of output is summarised in the following table.

Factories: Costs and Output, South Australia

Year	Salaries and Wages	Costs of Production		Value of Output
		Materials Used	Other (a)	
		\$'000		
1961-62	199,062	390,670	65,096	803,595
1962-63	220,067	466,238	68,694	914,074
1963-64	240,315	558,884	75,547	1,061,786
1964-65	274,225	620,682	87,560	1,206,830
1965-66	282,951	647,311	95,751	1,270,539

(a) Includes containers, tools replaced, repairs, power and fuel used, lubricants and water.

The difference between the specified costs and the total value of output includes all other costs and overhead expenses such as rent, interest, payroll and company taxation, and depreciation, as well as profits and drawings by working proprietors.

There is considerable variation in the importance of certain costs as between industrial classes. In the table below the various costs are expressed as a percentage of the value of output.

**Factories: Costs as Percentage of Output, South Australia
1965-66**

Industrial Class	Salaries and Wages	Costs of Production	
		Materials Used	Other (a)
		Per Cent	
1. Treatment of non-metalliferous mine and quarry products.....	15.5	43.7	11.2
2. Bricks, pottery, glass, etc.....	30.7	28.6	14.2
3. Chemicals, dyes, explosives, paints, oils, grease.....	9.6	53.1	10.6
4. Industrial metals, machines, conveyances....	24.9	53.2	4.9
5. Precious metals, jewellery, plate.....	33.1	29.3	4.8
6. Textile and textile goods (not dress).....	26.0	49.2	5.4
7. Skins and leather (not clothing or footwear)..	16.8	67.7	5.3
8. Clothing (except knitted).....	35.9	38.1	3.5
9. Food, drink and tobacco.....	15.0	55.0	13.2
10. Sawmills, joinery, boxes, etc., wood turning and carving.....	23.4	52.6	3.6
11. Furniture of wood, bedding, etc.....	25.2	51.1	2.1
12. Paper, stationery, printing, bookbinding, etc..	26.8	42.3	5.4
13. Rubber.....	28.4	48.4	6.7
14. Musical instruments.....	45.8	18.1	2.3
15. Miscellaneous.....	26.3	41.9	4.9
Total classes 1-15.....	22.3	51.8	6.8
16. Heat, light and power.....	19.3	12.0	39.5
Total all classes.....	22.3	50.9	7.5

(a) Includes containers, tools replaced, repairs, power and fuel used, lubricants and water.

VALUE OF OUTPUT AND PRODUCTION

A common measure of factory activity is that of value of output, this being the value of goods manufactured, plus amounts received for repairs and for work done on commission.

In the years immediately following the 1914-18 War the annual value of factory output was approximately \$40 million. After reaching a peak of \$74 million in 1926-27 output declined with a low point of \$39 million occurring in the depression year 1931-32. War time output showed some increase, but it was not until after the 1939-45 War that the value of factory output began to rise rapidly. Early rises which involved a trebling of output between 1945-46 and 1951-52 were, however, largely attributable to a rising price structure. Steadier prices after 1952-53 suggest that a substantial part of the increase from this date represented an increase in physical output. The value of output exceeded \$600 million in 1955-56, \$800 million in 1960-61 and \$1,250 million in 1965-66.

A division by industrial classes of the value of factory output for the years 1961-62 to 1965-66 is given below.

Value of Factory Output, South Australia

Industrial Class	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
1. Treatment of non-metalliferous mine and quarry products	27,479	30,298	35,735	39,222	39,480
2. Bricks, pottery, glass, etc.	14,759	17,258	18,620	20,285	19,398
3. Chemicals, dyes, explosives, paints, oils, grease.	41,854	51,546	70,808	87,056	97,087
4. Industrial metals, machines, conveyances	395,187	483,490	570,409	659,335	702,230
5. Precious metals, jewellery, plate	2,312	2,350	2,648	3,090	2,739
6. Textile and textile goods (not dress)	18,685	17,709	19,812	22,649	21,538
7. Skins and leather (not clothing or footwear)	14,246	17,437	18,580	15,730	14,644
8. Clothing (except knitted)	18,415	18,825	20,617	21,837	22,209
9. Food, drink and tobacco	140,565	137,498	151,230	167,087	175,135
10. Sawmills, joinery, boxes, etc., wood turning and carving	43,082	42,744	46,027	53,168	52,531
11. Furniture of wood, bedding, etc.	13,121	14,124	15,957	15,991	16,455
12. Paper, stationery, printing, bookbinding, etc.	33,642	36,762	41,495	45,055	49,675
13. Rubber	9,108	10,461	11,969	13,215	15,582
14. Musical instruments	120	109	114	112	99
15. Miscellaneous	6,023	8,240	10,421	12,950	13,519
Total classes 1-15	778,598	888,851	1,034,440	1,176,783	1,242,321
16. Heat, light and power	24,997	25,223	27,346	30,047	28,218
Total all classes	803,595	914,074	1,061,786	1,206,830	1,270,539

Value of production, *i.e.* the value added to raw materials by factory production, is useful both as a guide to the growth of secondary industry and as a measure of the relative contribution of the various industrial classes to total production.

Factory production has increased markedly since the 1939-45 War. However, when considering the statistics of value of production given in the next table, it should be borne in mind that prices and costs have risen substantially in the post-war period.

Value of Factory Production, South Australia 1925-26 to 1965-66

Period	Total Production	Production Per Employee	Production Per Head of Population
	\$'000	\$	\$
Annual Average			
1925-26 to 1929-30	25,344	674	44
1930-31 to 1934-35	16,308	594	28
1935-36 to 1939-40	26,338	622	44
1940-41 to 1944-45	50,210	776	82
1945-46 to 1949-50	76,564	1,058	116
1950-51 to 1954-55	180,598	2,132	238
1955-56 to 1959-60	273,508	2,998	308
1960-61 to 1964-65	398,608	3,878	398
Year			
1961-62	347,828	3,661	355
1962-63	379,142	3,748	380
1963-64	427,356	4,001	418
1964-65	498,588	4,444	474
1965-66	527,477	4,612	488

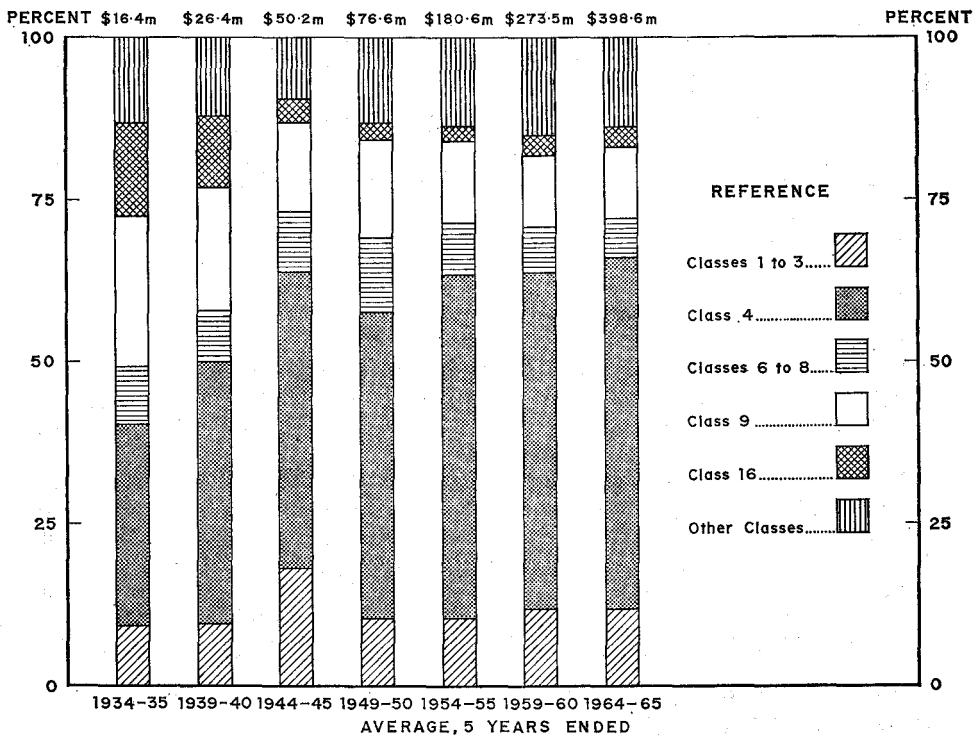
The contribution of each industrial class to total factory production in the last five years is shown below.

Value of Factory Production, South Australia

Industrial Class	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
1. Treatment of non-metalliferous mine and quarry products	12,199	14,729	16,766	17,952	17,807
2. Bricks, pottery, glass, etc.	8,269	9,698	10,650	11,575	11,115
3. Chemicals, dyes, explosives, paints, oils, grease...	17,965	20,694	26,420	33,116	35,263
4. Industrial metals, machines, conveyances	182,659	203,585	226,582	273,902	294,482
5. Precious metals, jewellery, plate	1,409	1,618	1,690	1,950	1,807
6. Textile and textile goods (not dress)	7,977	7,696	8,439	9,698	9,796
7. Skins and leather (not clothing or footwear)	3,044	3,441	3,595	3,564	3,954
8. Clothing (except knitted)	10,581	11,013	11,749	12,162	12,965
9. Food, drink and tobacco	42,173	41,401	46,860	52,765	55,691
10. Sawmills, joinery, boxes, etc., wood turning and carving	17,201	16,904	19,079	22,023	23,012
11. Furniture of wood, bedding, etc.	6,170	6,521	7,152	7,173	7,696
12. Paper, stationery, printing, bookbinding, etc.	17,733	19,311	21,709	23,561	25,939
13. Rubber	5,083	5,579	6,646	6,799	6,996
14. Musical instruments	93	89	90	86	79
15. Miscellaneous	3,270	4,103	5,423	6,701	7,189
Total classes 1-15	335,825	366,384	412,849	483,028	513,791
16. Heat, light and power	12,003	12,758	14,507	15,560	13,687
Total all classes	347,828	379,142	427,356	498,588	527,477

The relative importance of certain classes, and groups of classes, for earlier years is illustrated in the following bar chart.

NET VALUE OF FACTORY PRODUCTION (PROPORTION OF MAJOR CLASSES TO TOTAL)



FACTORY PREMISES AND EQUIPMENT

In the following tables values are given for land and buildings, and plant and machinery used in manufacturing pursuits. Where the premises and equipment are the property of the occupier the values are the depreciated values or book values existing in respect of them. Where premises or equipment are rented the value has been estimated by capitalising the annual rental for fifteen years in the case of land and buildings, and ten years for plant and machinery. The values below are accordingly not synonymous with total investment in industrial premises and equipment.

The value of productive factory premises at 30 June for the years 1962 to 1966 is given in the following table.

Factories: Value of Land and Buildings, South Australia

At 30 June

Industrial Class	1962	1963	1964	1965	1966
			\$'000		
1. Treatment of non-metalliferous mine and quarry products	6,525	6,986	7,118	8,635	9,120
2. Bricks, pottery, glass, etc.	3,539	3,927	4,437	5,350	5,390
3. Chemicals, dyes, explosives, paints, oils, grease....	8,459	9,640	9,909	9,794	10,039
4. Industrial metals, machines, conveyances	88,185	101,428	112,389	129,919	145,884
5. Precious metals, jewellery, plate	1,172	1,238	1,442	1,450	1,416
6. Textile and textile goods (not dress)	3,608	3,744	4,164	4,246	4,374
7. Skins and leather (not clothing or footwear)	1,384	1,440	1,524	1,390	1,332
8. Clothing (except knitted)	6,822	6,764	6,534	6,731	7,337
9. Food, drink and tobacco	29,360	30,677	33,229	35,633	37,015
10. Sawmills, joinery, boxes, etc., wood turning and carving	8,447	8,039	8,479	9,708	10,454
11. Furniture of wood, bedding, etc.	3,231	3,434	3,721	3,788	4,265
12. Paper, stationery, printing, bookbinding, etc.	11,094	11,736	13,066	13,832	15,889
13. Rubber	2,642	2,710	3,498	3,161	4,316
14. Musical instruments	140	113	104	109	102
15. Miscellaneous	1,522	1,979	2,433	3,032	3,246
Total classes 1-15	176,130	193,859	212,049	236,779	260,179
16. Heat, light and power	20,464	19,104	18,579	19,758	16,352
Total all classes	196,595	212,963	230,627	256,536	276,531

The estimated value of factory premises at 30 June 1947 was \$37.4 million of which \$9.6 million, or 26 per cent was for premises in Class 4. By contrast, premises in Class 4 in 1965-66 represented 53 per cent of total estimated value.

The value of plant and machinery employed in the above premises covers all machinery, implements, tools and includes vehicles and plant for the conveyance of raw materials. The total estimated value of plant and machinery employed at 30 June 1947 was \$36.8 million, a little less than 9 per cent of the value at 30 June 1966—\$423.5 million. Most of the plant and machinery is used in Class 4 (with 49 per cent of the total value in 1966 compared with 29 per cent in 1947) and Class 16 (17 per cent in 1966 compared with 25 per cent in 1947).

The value of plant and machinery at 30 June for the years 1962 to 1966 is shown in the following table.



Children at a kindergarten class.

S.A. Govt. Tourist Bureau

Children at play in the wading pool in the East Parklands of Adelaide.

Adelaide City Council





Broken Hill Associated Smelters Pty Ltd

The lead-smelting and refining works at Port Pirie—one of the largest in the world.

Factories: Value of Plant and Machinery, South Australia*At 30 June*

Industrial Class	1962	1963	1964	1965	1966
	\$'000				
1. Treatment of non-metalliferous mine and quarry products	15,831	14,610	14,346	14,606	17,783
2. Bricks, pottery, glass, etc.	3,002	3,679	4,766	6,728	8,539
3. Chemicals, dyes, explosives, paints, oils, grease	17,619	36,623	35,572	34,549	35,542
4. Industrial metals, machines, conveyances	92,634	107,629	139,662	186,133	207,816
5. Precious metals, jewellery, plate	262	326	353	427	415
6. Textile and textile goods (not dress)	3,979	4,040	4,656	4,239	4,606
7. Skins and leather (not clothing or footwear)	790	858	982	1,099	1,121
8. Clothing (except knitted)	2,597	2,617	2,897	3,317	3,629
9. Food, drink and tobacco	22,972	24,381	25,375	26,825	28,245
10. Sawmills, joinery, boxes, etc., wood turning and carving	9,005	8,302	8,324	9,373	9,298
11. Furniture of wood, bedding, etc.	1,040	1,137	1,320	1,261	1,284
12. Paper, stationery, printing, bookbinding, etc.	13,690	16,718	17,948	20,037	25,667
13. Rubber	1,389	1,356	2,037	1,603	6,683
14. Musical instruments	25	27	41	45	38
15. Miscellaneous	1,144	1,419	1,413	1,844	2,114
Total classes 1-15	185,979	223,722	259,692	312,085	352,779
16. Heat, light and power	67,026	69,886	70,589	76,847	70,679
Total all classes	253,005	293,608	330,281	388,932	423,458

Some indication of the mechanisation of each industrial class can be obtained by relating plant and machinery to persons employed.

In the following table an average of the values of plant and machinery employed at the beginning and the end of each year is divided by the average employment for that year.

Value of Plant and Machinery Per Person Employed, South Australia

Industrial Class	1961-62	1962-63	1963-64	1964-65	1965-66
	\$				
1. Treatment of non-metalliferous mine and quarry products	6,480	6,670	6,227	6,077	6,977
2. Bricks, pottery, glass, etc.	1,255	1,501	1,916	2,538	3,352
3. Chemicals, dyes, explosives, paints, oils, grease	5,852	9,212	11,228	10,808	10,633
4. Industrial metals, machines, conveyances	1,553	1,656	1,918	2,378	2,830
5. Precious metals, jewellery, plate	536	545	594	694	767
6. Textile and textile goods (not dress)	1,583	1,582	1,724	1,656	1,576
7. Skins and leather (not clothing or footwear)	716	708	765	1,005	1,094
8. Clothing (except knitted)	490	511	519	568	644
9. Food, drink and tobacco	1,960	2,106	2,142	2,191	2,234
10. Sawmills, joinery, boxes, etc., wood turning and carving	1,662	1,629	1,523	1,528	1,573
11. Furniture of wood, bedding, etc.	493	497	527	580	553
12. Paper, stationery, printing, bookbinding, etc.	2,773	3,123	3,476	3,668	4,191
13. Rubber	1,233	1,196	1,360	1,370	2,735
14. Musical instruments	703	813	1,063	1,262	1,377
15. Miscellaneous	968	1,021	1,025	1,005	1,119
Total classes 1-15	1,797	1,983	2,220	2,502	2,852
16. Heat, light and power	34,341	34,874	36,336	38,156	41,816
Total all classes	2,418	2,596	2,815	3,095	3,432

The considerable increase in Class 3 over the three years 1961-62 to 1963-64 was partly attributable to the new oil refining industry, which has an extremely high plant-employee ratio.

Details of additions to factory premises and equipment are recorded each year. These figures provide a guide to new investment in premises and equipment but also include the value of secondhand assets purchased by manufacturers. Where

a major construction programme is involved the total value of the asset is generally recorded when the premises are brought into production even though construction may have been spread over a number of years.

Additions to Factory Premises and Equipment, South Australia

Year	Industrial Metals, Machines, and Conveyances	Food, Drink and Tobacco	Paper, Stationery, Printing, Book-binding	Heat, Light and Power	Other Classes of Industry	Total
LAND AND BUILDINGS: \$'000						
1961-62	6,868	1,497	753	1,052	1,951	12,121
1962-63	9,343	1,626	1,239	609	3,441	16,258
1963-64	13,947	1,972	1,681	128	3,601	21,329
1964-65	19,800	2,800	950	975	4,711	29,236
1965-66	13,837	2,356	1,969	653	3,717	22,532
PLANT AND MACHINERY: \$'000						
1961-62	23,152	4,010	2,557	6,186	9,549	45,454
1962-63	26,791	3,618	4,762	4,647	26,151	65,969
1963-64	48,906	4,403	2,797	4,199	9,090	69,395
1964-65	58,133	4,367	4,003	6,295	11,701	84,499
1965-66	42,586	5,008	6,935	447	18,473	73,449

Statistics of motive power available in factories are given in the two following tables. In the first table, plant installed in electricity generating stations has been separated from that installed in other factories. The figures for generating stations refer to the 'rated capacity' of engines and generators installed, and for other factories to the 'rated horsepower' of engines ordinarily in use and of engines in reserve or idle. Obsolete engines are excluded altogether.

Engines and Electric Motors in Factories, South Australia

Rated horsepower of engines

Year	Ordinarily in Use						In Reserve or Idle	
	Steam	Internal Combustion			Driven by Electricity			Total (b)
		Gas (a)	Light Oil (a)	Heavy Oil (a)	Purchased	Own Generation		
IN ELECTRICITY GENERATING STATIONS								
1961-62	806,100	—	4,130	14,512	—	66,060	824,742	—
1962-63	800,200	—	4,404	13,559	—	66,871	818,163	—
1963-64	877,900	—	5,998	11,833	—	n.a.	895,731	—
1964-65	944,900	—	7,609	9,853	—	74,725	962,362	—
1965-66	904,200	20,614			—	69,796	924,814	—
IN OTHER FACTORIES								
1961-62	15,415	890	8,670	4,653	442,137	20,728	471,765	56,995
1962-63	20,527	688	9,275	3,273	465,366	23,221	499,129	62,995
1963-64	19,346	393	10,113	1,487	529,262	21,672	560,601	63,452
1964-65	19,211	403	9,967	1,677	605,300	24,775	636,558	63,207
1965-66	(c)60,064	11,262			656,699	32,019	728,025	62,317

(a) From 1965-66 no longer collected separately.

(b) Excludes motors driven by electricity of own generation, to avoid duplication.

(c) Includes one factory previously classified as electricity generating station.

n.a.—Not available.

Motive power in factories has naturally increased with post-war industrialisation. The electricity generating industry has had to help meet these increased demands from secondary industry as well as accommodate the domestic requirements of a rapidly expanding population, and at the same time expand its services into previously unserved areas. In 1946-47 comparable figures to those shown in the preceding table were 228,483 horsepower installed in generating stations and 205,132 horsepower, including that of engines in reserve or idle, in other factories.

The distribution of motive power in factories, other than electricity generating stations, between the various industrial classes is shown in the following table.

Engines and Electric Motors^(a) in Factories Other than Electric Generating Stations, South Australia

Industrial Class	1961-62	1962-63	1963-64	1964-65	1965-66
	Horsepower				
1. Treatment of non-metalliferous mine and quarry products	40,593	42,488	47,574	49,383	55,731
2. Bricks, pottery, glass, etc.	13,069	13,487	15,164	18,435	22,028
3. Chemicals, dyes, explosives, paints, oils, grease.	37,065	49,356	53,203	54,099	54,520
4. Industrial metals, machines, conveyances	225,812	234,533	281,545	339,856	404,814
5. Precious metals, jewellery, plate	1,153	2,381	1,277	1,353	1,267
6. Textile and textile goods (not dress)	9,655	9,810	9,916	10,047	10,374
7. Skins and leather (not clothing or footwear)	6,676	7,275	7,442	7,476	6,689
8. Clothing (except knitted)	4,595	4,709	4,805	4,897	5,673
9. Food, drink and tobacco	78,313	77,786	79,831	82,221	85,803
10. Sawmills, joinery, boxes, etc., wood turning and carving	57,702	62,873	63,863	68,520	68,612
11. Furniture of wood, bedding, etc.	7,311	7,461	7,800	6,911	7,915
12. Paper, stationery, printing, bookbinding, etc.	27,722	29,870	31,144	33,583	34,860
13. Rubber	7,905	8,836	10,033	11,201	19,679
14. Musical instruments	13	14	14	19	18
15. Miscellaneous					
16. Heat, light and power (a)	11,176	11,241	10,442	11,764	12,359
Total (excluding electricity generating stations)	528,760	562,120	624,053	699,765	790,342

(a) Includes engines and electric motors in reserve or idle, but excludes electric motors driven by electricity generated within the factory.

Further details of electricity generating stations are given on page 446.

SELECTED FACTORY PRODUCTS

The factory products listed in this section are not necessarily the principal products produced in this State. Where publication of details of an individual product would enable the output of a particular manufacturer to be determined, these figures are treated as confidential and are not separately available for publication. As a considerable number of products are produced in this State by industries containing one or two dominant firms, the list of publishable items is considerably restricted and the absence of a product from the list does not imply its non-production.

Values shown represent the selling value at the factory excluding delivery costs and charges, and excise duty where applicable.

Selected Factory Products, South Australia

Item	Unit	Quantity Produced			Value at Factory		
		1963-64	1964-65	1965-66	1963-64	1964-65	1965-66
					\$'000	\$'000	\$'000
Aerated and carbonated waters	'000 gal	11,310	11,526	12,792	5,247	5,983	6,850
Air conditioning (excluding room conditioners)		—	—	—	1,938	3,108	2,933
Bacon and ham	'000 lb	7,386	7,807	8,303	—	—	—
Bags :							
Hessian (excluding sugar)	doz	303,512	295,618	440,263	536	582	940
Paper (excluding multiwall)		—	—	—	1,351	1,518	1,450
Blinds and awnings :							
Metal venetian		—	—	—	674	767	722
Canvas		—	—	—	428	425	463
Other		—	—	—	753	719	767
Boxes and cartons, paperboard, etc.		—	—	—	5,386	5,800	6,595
Boxes and cases, wooden (including shooks) :							
Fruit cases	'000	9,019	8,916	8,848	2,751	2,694	2,636
Other		—	—	—	2,642	2,646	2,819
Bread (in terms of 2 lb loaves)	'000	76,459	77,130	77,973	9,469	9,955	10,328
Bricks :							
Clay	'000	144,314	153,153	134,533	5,438	5,987	5,181
Cement, standard size	'000	8,682	n.a.	n.a.	239	n.a.	n.a.
Butter	ton	7,405	7,685	7,214	5,612	5,928	5,416
Cakes, pastry, pies, etc.		—	—	—	7,933	8,879	9,511
Cans and containers, metal		—	—	—	2,993	3,829	4,019
Cardigans, pullovers, etc.: Mens and boys	doz	11,669	11,760	12,661	562	668	645
Caravans complete	No.	898	909	892	1,097	1,375	1,452
Casks and barrels	No.	16,850	17,803	n.a.	339	392	n.a.
Cheese (green weight)	ton	15,284	17,338	16,197	7,541	9,105	8,415
Concrete, ready mixed	cub yd	659,374	815,554	772,519	6,372	7,388	6,991
Confectionery :							
Chocolate and chocolate coated	'000 lb	2,651	2,777	3,424	1,166	1,238	1,452
Other	'000 lb	3,486	3,285	3,505	741	707	756
Cordials and syrups (excluding cordial extract)	'000 gal	445	480	665	578	598	796
Cycles	No.	9,588	11,439	10,083	—	—	—
Electrical apparatus: Regulating, starting and controlling		—	—	—	921	2,033	1,680
Electric motors	No.	n.a.	n.a.	183,348	—	—	—
Electricity generated	mill kWh	2,547	2,863	3,226	—	—	—
Envelopes		—	—	—	624	661	685
Fertilisers :							
Superphosphate	ton	523,082	608,136	605,704	—	—	—
Mixed chemical	ton	104,244	94,839	n.a.	3,919	3,736	n.a.
Blood, bone, or offal	ton	3,835	4,589	n.a.	208	206	n.a.
Floorboards, Australian timber	'000 sup ft	18,822	n.a.	n.a.	2,572	n.a.	n.a.
Flour, white	short ton	170,935	157,520	149,102	—	—	—
Footwear, other than rubber	pair	1,938,709	2,008,288	1,888,256	7,279	7,587	7,674
Fruit :							
Canned or bottled	'000 lb	58,420	81,942	67,412	n.a.	n.a.	n.a.
Crystallised and glace	'000 lb	1,348	n.a.	977	476	n.a.	329
Furniture :							
Metal furniture and office equipment		—	—	—	4,756	5,368	5,555
Wooden (excluding wicker, etc.)		—	—	—	10,152	10,146	9,874
Gloves, work	doz pair	82,137	96,533	97,232	641	744	751
Lacquers, nitro-cellulose	gallon	77,037	102,010	93,500	364	431	383
Machinery :							
Metal working other than machine tools		—	—	—	3,310	n.a.	5,055
Conveyors and conveying systems		—	—	—	1,341	1,806	3,158
Cranes, hoists, winches, etc.		—	—	—	2,223	2,300	2,280
Weighing appliances		—	—	—	408	440	602
Mattresses :							
Inner spring	No.	67,454	77,934	75,309	995	1,138	1,124
Woven wire, spring, etc.	No.	39,433	48,143	47,081	401	n.a.	n.a.
Other (including rubber)	No.	19,869	21,220	20,766	228	250	276
Medicines, proprietary		—	—	—	1,800	n.a.	1,876
Nails	ton	2,450	2,743	2,552	553	691	655
Paints (excluding plastic) :							
Architectural and decorative ;							
Primers and undercoats ..	'000 gal	162	164	149	562	565	549
Finishing coats	'000 gal	424	403	360	1,998	1,885	1,636
Industrial :							
Finishing coats	'000 gal	428	539	516	1,802	2,171	2,187
Paints, plastic	'000 gal	307	381	366	1,233	1,539	1,596
Pickles	'000 pints	1,590	1,327	1,848	330	301	461
Pipes and tubes, ferrous (excluding sheet metal)	ton	54,449	76,354	n.a.	21,548	27,079	n.a.
Plaster sheets (a)	'000 sq yds	1,158	1,147	3,047	779	755	1,843

(a) Figures prior to 1965-66 refer to production of fibrous plaster sheet only.
n.a.—Not available.

Selected Factory Products, South Australia (continued)

Item	Unit	Quantity Produced			Value at Factory		
		1963-64	1964-65	1965-66	1963-64	1964-65	1965-66
					\$'000	\$'000	\$'000
Refrigeration equipment (excluding drinking water coolers)		—	—	—	5,750	4,342	4,625
Sauce, tomato	'000 pints	2,711	1,844	2,885	489	322	504
Soaps and detergents	cwt	39,743	41,489	51,449	447	480	568
Springs (including laminated)		—	—	—	1,020	1,298	1,389
Steam, gas and water fittings		—	—	—	2,169	2,361	2,498
Steel, fabricated, structural	ton	46,053	48,186	48,906	11,016	12,477	12,078
Stock and poultry foods, cereal based	short ton	72,995	n.a.	n.a.	4,461	n.a.	n.a.
Tallow, inedible	'000 lb	18,101	17,716	18,596	863	1,095	1,151
Thinners	gallon	539,550	521,774	467,195	644	646	564
Timber:							
From local logs;							
Hardwood	'000 sup ft	5,363	5,430	4,526	—	—	—
Softwood	'000 sup ft	134,499	131,624	132,845	—	—	—
Dressed (excluding floorboards and weatherboards)	'000 sup ft	17,757	25,279	25,125	2,796	4,255	4,626
Trailers (excluding low loading)	No.	2,371	2,180	2,020	586	581	599
Trailers, semi (excluding low loading)	No.	186	171	150	695	624	518
Tyres, retreaded and recapped	No.	314,442	322,727	332,570	3,208	—	—
Vegetables, canned or bottled	'000 lb	2,546	2,323	2,151	525	—	529
Water heating systems, electric	No.	11,052	12,867	n.a.	866	1,041	n.a.
Window frames, metal		—	—	—	2,991	2,857	2,803
Wines and spirits:							
Beverage wine;							
Fortified	'000 gal	7,305	7,523	6,451	7,486	—	7,376
Unfortified	'000 gal	5,200	6,018	5,951	—	—	—
Distillation wine	'000 gal	15,457	15,442	12,264	—	—	—
Spirits distilled;							
Grape spirit	pf gal	2,129,667	2,151,294	1,967,709	—	—	—
Brandy	pf gal	1,052,850	1,183,331	1,167,309	—	—	2,568
Wool, scoured or carbonised	'000 lb	18,991	16,471	16,918	—	—	—

n.a.—Not available.

GOVERNMENT FACTORIES

Approximately 8 per cent of factory employment in 1965-66 was in government factories, *i.e.* in manufacturing plants or workshops operated by Commonwealth or State government departments or semi-governmental authorities. Included were electricity generating stations, railway and omnibus workshops, abattoirs, sawmills, and a number of workshops associated with telephone services, water supply, highways and building.

Government Factories, South Australia

Particulars	1963-64	1964-65	1965-66
Number of factories	97	96	96
Average number of employees	9,522	9,415	9,143
		\$'000	
Value of land and buildings	30,559	32,828	29,818
Value of plant and machinery	72,731	79,221	75,240
Salaries and wages paid	21,271	22,770	23,123
Materials, fuel and power used	23,370	28,626	29,636
Value of production	36,515	38,890	39,621

INDIVIDUAL INDUSTRIES

In this section details are given of major South Australian secondary industries. However, statistics relating to a number of important industries are not available for publication because of the need to maintain confidentiality of details for individual businesses. Where the activities of a factory encompass more than

one industry and the operations of the factory are not statistically divisible all details of the establishment are accredited to the major activity. Statistics for an individual industry may therefore include limited outside activity and may exclude production which is ancillary to other industries.

In the following tables 'Persons Employed' refers to average employment for the whole year; 'Motive Power' to the rated horsepower of engines ordinarily in use, but excluding motors driven by electricity generated within the plant; and 'Value of Premises and Equipment' to book values at the end of each year. Allowance has been made for rent by capitalising the annual rental for fifteen years in the case of land and buildings, and ten years for plant and machinery. The drawings of working proprietors are excluded from 'Salaries and Wages'.

Cement Products

The post-war building boom resulted in an expansion of the building materials industries. Supported by two producers of portland cement are some eighty-seven firms producing a variety of cement products. The output of the cement products industry is largely accounted for by ready mixed concrete, pre-stressed concrete, concrete pipes, modular masonry and cement roofing tiles. In addition considerable quantities of asbestos cement sheeting and pipes are produced each year.

Cement Products (Excluding Asbestos Cement), South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	79	1,051	5,505	7,104	2,226	6,136	11,552	5,416
1962-63	78	1,100	6,109	6,741	2,699	7,258	13,744	6,486
1963-64	85	1,107	6,802	5,996	2,808	8,878	15,618	6,740
1964-65	84	1,127	6,463	6,289	3,118	10,243	17,221	6,978
1965-66	87	1,019	6,884	6,595	2,646	9,879	15,642	5,763

Bricks and Tiles

There are a considerable number of clay brick producers operating in South Australia. The majority of these brickworks are located near Adelaide and in the Adelaide hills, with larger country plants at Nuriootpa, Port Pirie and Whyalla. One organisation accounts for nearly all terracotta roofing tile production.

Brick and Tile Works, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	41	756	7,713	2,740	1,742	1,389	4,217	2,829
1962-63	42	800	8,055	2,803	1,913	1,617	5,042	3,425
1963-64	40	815	9,582	4,057	2,023	1,993	5,957	3,964
1964-65	40	812	11,599	6,760	2,249	2,284	6,577	4,294
1965-66	37	791	13,379	7,385	2,026	2,181	6,180	4,000

Industrial and Heavy Chemicals

Foremost in the production of industrial and heavy chemicals is a large soda ash plant at Osborne, associated with nearby saltfields at Dry Creek. This plant is the major producer in the Australian alkali industry.

Two organisations are involved in the production of industrial gases and a further plant produces sulphuric acid, largely for use in the fertiliser industry.

Industrial and Heavy Chemicals, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	13	858	8,746	13,300	2,268	3,415	9,665	6,250
1962-63	16	829	7,954	12,928	2,274	3,648	9,873	6,225
1963-64	16	979	10,727	13,875	2,799	4,964	12,816	7,852
1964-65	16	991	10,577	14,169	3,119	4,876	15,589	10,713
1965-66	17	988	11,249	13,965	3,126	5,652	15,166	9,514

Paints

A variety of paint and allied finishes are produced in plants operated by a number of major paint manufacturers. This industry has been subject to expansion both in output and technical progress with recent emphasis on industrial and plastic paints.

Paint and Varnish Factories, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	18	398	1,869	2,071	892	3,962	7,142	3,180
1962-63	15	402	1,790	2,234	919	4,493	8,212	3,719
1963-64	16	460	2,396	2,282	1,103	4,782	8,822	4,040
1964-65	19	480	2,443	2,358	1,216	5,284	9,515	4,231
1965-66	20	480	2,365	2,367	1,305	5,024	9,136	4,112

Chemical Fertilisers

In the chemical fertiliser industry there are major plants at Port Adelaide, Port Lincoln and Wallaroo. The most important product is superphosphate which represented approximately 70 per cent of the total value of output in 1965-66, with various mixed fertilisers accounting for most of the balance.

Chemical Fertiliser Plants, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	10	825	11,170	7,501	1,841	9,097	13,160	4,063
1962-63	11	781	13,969	7,064	1,857	10,394	14,930	4,536
1963-64	9	722	9,684	5,588	1,725	10,046	14,172	4,126
1964-65	9	779	10,040	4,682	2,097	11,872	16,564	4,692
1965-66	10	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

n.a.—Not available.

Mineral Oil

Prior to 1963 production in this field was comparatively small and confined largely to the processing of various bituminous products. However, in March 1963 a further milestone in industrial development was reached with the opening of an oil refinery at Port Stanvac, some fifteen miles south of Adelaide. The

Port Stanvac refinery provides a variety of petroleum products including refinery gas for conversion into domestic gas, and residual oil for use in electricity generation.

Metal Extraction and Refining

Since the turn of the century most of the iron ore used in the Australian steel industry has come from the Middleback Ranges, inland from Whyalla. In 1941, with the installation of a blast furnace, Whyalla became the major source of Australia's foundry iron. This production ceased in 1965 when a steel mill was opened, with the hot metal being fed directly into the steel works.

Port Pirie is the site of one of the world's largest lead smelters, treating ore railed from Broken Hill. The plant also produces silver, gold, cadmium and copper by-products. A new plant has recently been completed for the recovery of zinc and, to a lesser extent, lead from a huge slag dump.

Plant, Equipment, Machinery and Other Engineering

For a number of years South Australia has been one of the leading States in the production of the larger household appliances, including refrigerators, washing machines and stoves. These items constitute a significant part of the total output shown in the next table. Also represented are manufacturers of industrial, construction, and earthmoving machinery, air conditioning equipment, metal furniture and office equipment, and a wide variety of fabricated steel products, together with a large number of general engineering workshops.

Plant, Equipment, Machinery and Other Engineering, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	475	14,875	57,933	38,782	30,365	53,845	100,136	46,291
1962-63	489	15,516	57,772	43,371	33,344	59,744	110,868	51,124
1963-64	508	16,409	60,548	46,527	36,887	67,996	125,503	57,507
1964-65	523	17,778	63,545	50,697	43,615	73,735	140,816	67,081
1965-66	541	18,306	68,951	52,354	46,543	72,693	148,013	75,319

Electrical Machinery, Cables and Apparatus

This classification includes two producers of cables and wires, the production of fluorescent and other light fittings, and of household electrical fittings.

Electrical Machinery, Cables and Apparatus, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	131	2,063	2,406	4,239	4,139	6,477	12,924	6,447
1962-63	142	2,110	2,765	4,525	3,993	6,792	14,027	7,235
1963-64	149	2,610	3,457	4,233	4,928	9,534	18,388	8,855
1964-65	147	2,757	4,560	6,291	5,493	11,145	20,991	9,846
1965-66 (a)	194	2,851	5,402	7,507	5,777	11,085	21,126	10,040

(a) Figures for 1965-66 not strictly comparable with earlier years owing to the inclusion of a number of factories which have been reclassified.

Not included in the preceding table is the output of a very large enterprise manufacturing mainly wireless and television apparatus but which also produces electrical cable and wires, and lighting equipment.

Railway Rollingstock

The principal workshop of the South Australian Railways is situated at Islington. Although concerned primarily with repairs and maintenance, a number of power rail cars and a variety of goods wagons and freight cars have been constructed at Islington in recent years. The South Australian Railways maintains four other metropolitan workshops and seven country workshops, mainly for servicing, with the largest being at Peterborough.

Repairs and maintenance to Commonwealth Railways rollingstock operating from Port Pirie to Kalgoorlie and Alice Springs are carried out in workshops located at Port Augusta.

In 1963-64, the last year for which figures were available for publication, thirteen factories employing 3,699 persons were associated with the production, repair or maintenance of railway rolling stock, output in that year was valued at \$16,783,000 and production \$10,795,000.

Motor Vehicles

The largest single industry in South Australia and a major contributor to the post-war industrial growth is the motor vehicle industry. However, as there are only a few firms engaged in motor vehicle production, statistics relating to production are not published as the release of total figures could possibly reveal the details of one firm.

Immediately after the 1939-45 War, General Motors-Holden Pty Ltd prepared for the production of an Australian built car, and volume production of the 'Holden' commenced in 1948. The success of this car has led to a number of major increases in productive capacity by the firm involving not only considerable expansion at the Woodville site but also the establishment of a new construction and assembly plant at Elizabeth.

Tonsley Park has become the centre of manufacturing operations for Chrysler Australia Ltd and in July 1967 the company expanded its operations and opened a large foundry and engine plant at Lonsdale, near Port Stanvac.

These large motor vehicle plants in turn absorb the products of many establishments producing vehicle components. Other manufacturers produce omnibus and commercial vehicle bodies, fork lift trucks, garage equipment, trailers, caravans, and a wide range of vehicle accessories.

Repairs to motor vehicles are carried out in the larger workshops operated by new vehicle distributors and in the many smaller workshops generally associated with service stations.

Motor Vehicle Repair Workshops, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	1,162	6,141	8,534	17,863	9,548	11,913	27,089	15,176
1962-63	1,342	6,742	8,780	21,107	10,866	14,188	31,721	17,534
1963-64	1,355	7,158	9,045	20,856	12,058	15,403	35,128	19,725
1964-65	1,373	7,443	11,301	22,244	13,681	17,288	39,701	22,413
1965-66	1,423	7,277	11,906	23,656	13,655	17,628	41,011	23,383

Ship and Boat Building

The largest shipyards in Australia are located at Whyalla. Since 1941 forty-six vessels have been constructed in these yards including the largest vessel yet built in Australia, the 55,000 ton bulk ore-carrier *Iron Hunter*, which was launched in 1968. An oil drilling barge, the *Ocean Digger*, was completed in mid-1967 weighing 9,100 tons and standing 310 feet high. This vessel was only the fifth of its kind built in the world and was subsequently used in the search for oil off Robe in the South-East of South Australia.

Tugs and larger fishing boats are built in shipyards at Port Adelaide; the largest vessel ever built at these shipyards—a 350 foot steel barge—was launched in mid-1968. Other establishments produce smaller commercial and pleasure craft and carry out slipway repair work.

In 1965-66, thirty establishments employing 1,886 persons were associated with ship and boat building or repairing. In that year the industry had a value of output of \$17,801,000 and a production value of \$8,091,000.

Agricultural Machinery and Implements

The production of agricultural machinery and implements is one of the State's oldest industries. The industry contains a number of comparatively large producers, four of whom accounted for nearly 80 per cent of total output in 1965-66.

Agricultural Machinery and Implements, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	57	1,764	6,577	3,490	3,482	5,401	12,041	6,639
1962-63	63	1,874	6,818	3,641	3,773	5,773	12,955	7,181
1963-64	65	2,008	6,917	4,076	4,291	6,137	14,090	7,953
1964-65	73	2,132	6,990	4,717	5,093	7,228	17,117	9,888
1965-66	83	2,079	8,581	5,011	4,753	6,063	14,008	7,945

Sheet Metal Working

Details of factories whose main activities are sheet metal working, pressing and stamping are given in the following table.

Sheet Metal Working, Pressing and Stamping, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	120	2,835	9,397	7,670	5,460	12,099	21,335	9,236
1962-63	130	3,080	9,758	9,339	6,119	13,127	23,696	10,569
1963-64	131	3,322	9,604	10,757	7,323	14,062	27,030	12,968
1964-65	129	3,560	10,524	9,855	8,364	18,833	33,928	15,094
1965-66	127	3,702	10,804	10,701	8,764	17,859	34,096	16,237

Ferrous Pipes, Tubes, and Fittings

A number of large pipe and tube making firms are located in Adelaide. These firms accounted for more than 20 per cent of the total Australian value of output of ferrous pipes, tubes, and fittings for 1965-66.

Ferrous Pipes, Tubes, and Fittings, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	9	2,151	11,674	7,474	5,242	10,814	20,191	9,377
1962-63	8	2,209	12,034	7,156	5,675	12,442	22,092	9,651
1963-64	8	2,391	16,349	7,596	6,472	13,401	25,181	11,780
1964-65	8	2,668	20,597	7,883	7,888	17,275	31,831	14,556
1965-66	9	2,690	22,734	7,582	7,635	15,588	28,017	12,430

Wire and Wireworking (Including Nails)

Nearly all of the thirty-one factories associated with the wire working industry are located in Adelaide. Major production items are woven wire, welded wire fabric, processed reinforced rods, springs, barbed wire and nails.

Wire and Wireworking (Including Nails), South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	29	890	2,462	2,769	1,810	5,668	9,296	3,628
1962-63	29	1,092	2,737	3,088	2,165	6,522	10,212	3,690
1963-64	27	851	2,403	2,833	1,938	5,532	9,292	3,760
1964-65	27	892	2,332	2,937	2,169	6,512	10,518	4,006
1965-66	31	984	2,926	3,860	2,446	6,628	10,689	4,061

Cotton and Woollen Mills

Cotton spinning and weaving is carried out in three mills located in the metropolitan area, with the most important products being sheeting, canvas and duck, and towelling.

The two largest of three operative woollen mills are located at the country centres of Lobethal and Mount Gambier. Activity is concentrated largely on the production of blankets and rugs and on worsted spinning.

Cotton and Woollen Mills, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	9	1,908	5,988	6,146	3,502	5,819	12,012	6,194
1962-63	9	1,951	6,013	6,241	3,478	5,883	11,757	5,874
1963-64	7	1,922	6,579	7,265	3,855	6,986	13,544	6,558
1964-65	7	2,040	6,880	6,895	4,193	7,972	15,517	7,545
1965-66	7	2,095	7,240	7,117	4,436	8,093	15,638	7,544

Food and Drink

Details of various food and drink industries which together accounted for 14 per cent of the value of factory output in 1965-66 are given in the following table.

**Food and Drink: Individual Industries, South Australia
1965-66**

Individual Industry	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
Flour milling	18	449	5,308	2,806	1,141	13,461	15,648	2,187
Bakeries	267	2,091	5,072	8,599	4,109	11,667	20,203	8,537
Jam, fruit and vegetable canning	12	815	2,423	3,472	1,835	7,195	9,989	2,795
Bacon curing	14	653	2,907	2,439	1,507	10,263	13,261	2,998
Butter	14	298	2,754	1,167	595	4,899	6,070	1,171
Cheese	30	463	3,293	2,743	1,096	6,936	9,181	2,245
Meat and fish preserving	24	260	1,007	1,101	490	4,908	6,440	1,532
Condiments, coffee and spices	17	459	1,720	2,574	858	3,980	5,665	1,685
Ice and refrigerating	58	440	10,497	5,641	989	1,004	2,535	1,531
Aerated waters, cordials, etc.	44	760	2,904	4,701	1,613	5,820	9,643	3,823
Distilleries and winemaking	78	1,481	12,553	9,016	3,414	14,156	22,437	8,281
Other food or drink industries	167	4,155	24,520	21,001	8,599	35,155	54,063	18,906
Total	743	12,324	74,958	65,260	26,246	119,444	175,135	55,691

Flour Milling and Bakeries

The post-war years have seen considerable consolidation in the flour milling industry. In 1946-47 there were thirty-nine operative mills compared with eighteen in 1965-66. Of these eighteen mills, three are located at Port Adelaide, one at Mile End and one at Salisbury, the remainder being located in country areas. Employment in flour milling totalled 449 persons in 1965-66, with a value of output of \$15,648,000 and a value of production of \$2,187,000.

Details of establishments producing bread, cakes and pastries are shown in the following table.

Bakeries, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	296	1,777	4,240	7,851	2,883	9,493	15,911	6,418
1962-63	288	1,795	4,214	8,201	3,056	9,473	16,322	6,849
1963-64	282	1,877	4,531	8,275	3,350	10,313	17,620	7,308
1964-65	278	2,022	4,810	8,769	3,812	11,213	19,119	7,906
1965-66	267	2,091	5,072	8,599	4,109	11,667	20,203	8,537

Wineries and Distilleries

Another early industry and one involving traditional skills is that of wine-making. In 1965-66, South Australia accounted for 57 per cent of the total value of output of Australian wineries and distilleries. Principal production areas are the Barossa Valley, the Upper Murray irrigation areas and the districts south of Adelaide. See pages 376-95 for further details.

Wineries and Distilleries, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	70	1,348	14,174	6,633	2,535	12,500	17,992	5,493
1962-63	68	1,337	11,089	7,385	2,596	10,194	15,161	4,966
1963-64	72	1,393	11,503	7,830	2,803	12,842	19,884	7,042
1964-65	74	1,461	12,142	8,406	3,033	14,010	23,119	9,109
1965-66	78	1,481	12,553	9,016	3,414	14,156	22,437	8,281

Sawmilling

Well over half of Australia's plantation grown pines are in South Australia. Details of milling operations are given in the table below. Of the ninety-five mills recorded for 1965-66, seventy-five were in country districts with almost all the larger mills being located near the South East forests. The State Woods and Forests Department operates mills at Mount Gambier, Mount Burr, and Nangwarry. In addition to the milling of logs for flooring, cases, etc. facilities exist for kiln drying and timber preservation, with increasing quantities of fencing posts and poles being treated each year.

Sawmills, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	82	2,304	32,885	10,080	4,176	15,004	23,094	8,091
1962-63	85	2,341	37,244	9,393	4,501	15,503	23,600	8,097
1963-64	91	2,485	37,796	9,863	4,872	16,553	26,402	9,849
1964-65	89	2,429	38,164	10,454	5,266	18,254	28,786	10,533
1965-66	95	2,511	37,325	10,273	5,408	16,879	27,679	10,800

In South Australia there are some 290 joinery workshops. In 1965-66 these workshops employed 2,392 persons, with output being valued at \$14,813,000 and production at \$7,457,000. The motive power of electric motors employed has increased steadily over the last six years from 8,651 horsepower in 1960-61 to 12,527 horsepower in 1965-66.

Cabinet and Furniture Making

Details of cabinet and furniture making establishments are given in the following table. The 168 factories in 1965-66 varied in size from the many small establishments run solely by a working proprietor or employing one or two persons to three factories each employing over 100 persons.

Cabinet and Furniture Making, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	172	1,584	5,711	3,013	2,619	4,770	9,276	4,505
1962-63	172	1,667	5,684	3,168	2,771	5,381	10,095	4,714
1963-64	178	1,794	5,995	3,614	3,127	6,233	11,549	5,316
1964-65	160	1,666	4,742	3,277	3,104	6,032	11,234	5,202
1965-66	168	1,750	5,557	3,730	3,246	5,824	11,434	5,611

Newspapers and Periodicals

There are two large establishments producing newspapers in Adelaide. Newspaper printing offices are also located in some thirty-three country towns, a number of these producing newspapers for more than one locality. An historical summary of the press in South Australia is given on page 189.

Newspapers and Periodicals, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	36	1,182	4,845	6,883	2,933	4,378	9,702	5,324
1962-63	37	1,180	4,920	7,885	2,887	4,925	10,393	5,468
1963-64	39	1,249	5,274	8,748	3,235	5,370	11,787	6,416
1964-65	39	1,279	5,324	9,550	3,468	5,686	12,238	6,552
1965-66	39	1,315	6,133	9,783	3,475	5,531	12,737	7,206

Printing and Bookbinding

Particulars of general printing establishments, other than those printing newspapers and periodicals, are given in the following table. Excluded are the extensive activities of the State Government Printing Office.

The activities of one establishment include the printing and binding of a wide range of books for Australian and overseas publishers.

General Printing and Bookbinding, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	114	1,677	2,793	5,755	3,167	3,632	9,022	5,391
1962-63	120	1,775	2,938	5,528	3,403	4,104	9,987	5,883
1963-64	115	1,732	3,588	6,887	3,495	4,153	10,405	6,253
1964-65	115	1,729	3,663	6,853	3,697	4,343	10,760	6,417
1965-66	113	1,829	3,919	7,694	4,147	4,804	12,104	7,300

A further eighteen factories in 1965-66 were involved in the production of cardboard containers and paper bags. Containers and bags to the value of \$8,965,000 were produced, with the value of production being \$3,715,000. Employment in these establishments totalled 702.

Electricity Generation

The Electricity Trust of South Australia is responsible for the generation of most of the State's electricity requirements. A resumé of the activities of the Electricity Trust is given in Part 8.6.

Government Electricity Generating Stations, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	12	1,365	771,769	76,598	3,360	8,568	18,624	10,056
1962-63	10	1,441	765,060	78,155	3,698	8,082	18,482	10,401
1963-64	10	1,436	841,778	77,515	3,968	8,527	20,211	11,684
1964-65	9	1,492	908,983	84,426	4,080	n.a.	n.a.	n.a.
1965-66	12	1,421	911,901	77,149	4,460	n.a.	n.a.	n.a.

n.a.—Not available.

Small quantities of electricity are generated by local authorities or private firms for domestic consumption in certain country areas, and a number of private firms operate power stations for their own needs.

9.4 VALUE OF PRODUCTION

Factory production accounted for 59 per cent of the total net value of production (excluding building and construction) in South Australia during 1966-67 while pastoral and agricultural production accounted for 14 per cent and 15 per cent respectively.

Details for the last five years of these and other classes of production are given in the tables below. In the first, primary production is expressed in terms of gross value, this being the value placed on recorded production at the whole-sale prices realised in principal markets.

Gross Value of Primary Production, South Australia

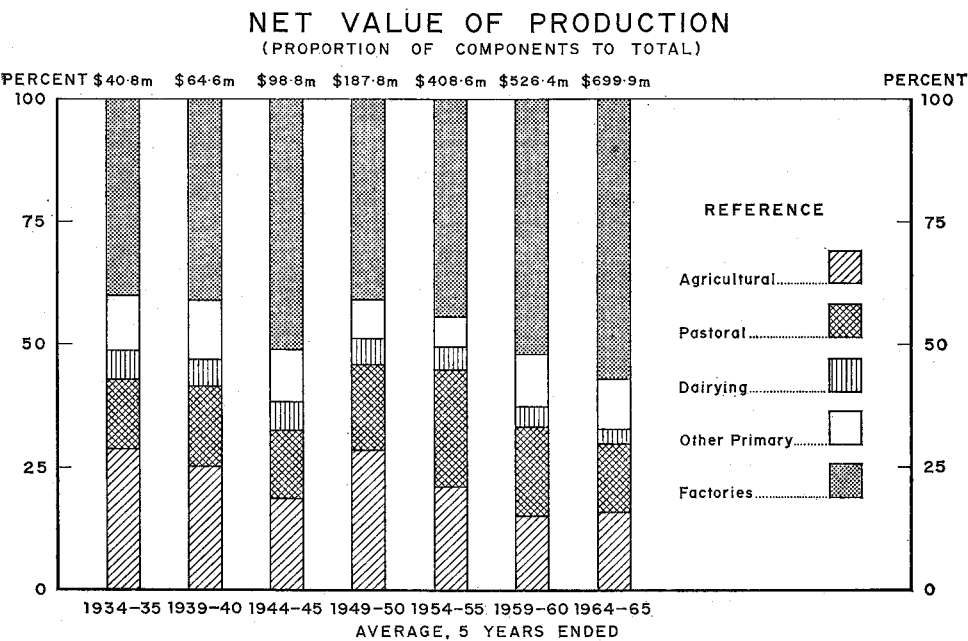
Class of Production	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Agricultural	128,417	165,634	178,132	144,017	184,085
Pastoral	127,386	150,466	135,916	152,224	169,226
Dairying	31,968	34,267	37,533	39,293	39,034
Other rural	7,272	8,435	8,926	9,481	11,246
Mining and quarrying	56,967	66,024	71,662	72,765	76,901
Forestry	8,170	8,219	8,846	9,729	9,031
Other	3,986	4,730	6,119	6,989	6,780
Total primary	364,167	437,775	447,134	434,498	496,302

In the next table primary production is expressed in terms of net value and incorporated with comparable figures for factory production. The net value of primary production is the gross value less marketing costs and costs of materials used in the process of production. The factory figures are for value added in the process of manufacture, *i.e.* the value of output less value of materials and fuels used.

Net Value of Production, South Australia

Class of Production	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Agricultural	93,357	125,180	134,239	105,657	138,901
Pastoral	103,991	125,979	110,054	123,757	136,183
Dairying	19,741	21,195	25,005	25,127	24,606
Other rural	1,739	2,366	2,052	2,393	3,616
Mining and quarrying	49,603	57,836	62,727	62,727	66,909
Forestry	8,116	8,168	8,801	9,693	8,992
Other	3,457	4,111	5,371	6,124	5,954
Total primary	280,004	344,835	348,249	335,478	385,162
Factory	379,142	427,356	498,588	527,477	563,263
Total	659,146	772,191	846,837	862,955	948,425

Movements in the relative contributions of individual classes to total production since 1929-30 can be readily seen in the following bar chart.



Earlier information on the gross value of primary production, since 1908-09 is given in the Statistical Summary on page 588 while details of net value of production since 1925-26 are on page 589.

PART 10

COMMERCE

10.1 INTERNAL TRADE

RETAIL TRADE

Various aspects of retail trading in South Australia are subject to control under State legislation. These include hours of trading in the metropolitan and specified country areas, which are controlled under the Early Closing Act, 1926-1960, administered by the Department of Labour and Industry; prices for a variable range of goods which are controlled under the Prices Act, 1948-1967, administered by the South Australian Prices Department; and minimum wages payable and some other conditions of employment which are prescribed in awards and determinations of the State Industrial Commission and Conciliation Committees. Some classes of employees are covered by Commonwealth awards.

Statistics of retail sales and other information concerning the structure and pattern of retail trading have been obtained from Censuses of Retail Establishments conducted throughout Australia in respect of the years ended 30 June 1948, 1949, 1953, 1957, and 1962. In addition, quarterly estimates of the value of retail sales have been calculated from September quarter 1950 by means of sample surveys.

Censuses of Retail Establishments

In general terms, the Censuses cover the retail trading activities of establishments which normally sell goods by retail to the general public from fixed premises such as shops, rooms, kiosks, and yards. Retail activities of wholesalers and manufacturers who sell regularly by retail to the general public are included. Sales by itinerant vendors, sales from casual stalls and booths, and sales by establishments with total retail sales of less than \$1,000 in census years are excluded.

The design of the censuses is such that particulars reported indicate the value of retail sales to the final consumer, of new and secondhand goods generally used for household and personal purposes. For this reason reported sales of building materials, farm and industrial machinery and equipment, earth-moving equipment, etc. have been excluded. For the same reason, and also because of difficulties in obtaining reliable and complete reporting, retailers were requested to report separately sales of builders hardware and supplies, business machines and equipment, grain, feed, fertilisers and agricultural supplies, and tractors and these were excluded from the 1961-62 Census. Retail sales of motor vehicles, parts, etc. are included whether for industrial, commercial, farm or private use.

At each census every establishment was classified according to type of business. For most businesses the classification was based on the commodity or commodity group in which predominant sales were recorded. Details of number of establishments, value of retail sales and value of stocks for the various types of business at the last two censuses are shown in the following table.

Retail Establishments, Sales and Stocks by Type of Business, South Australia
Censuses 1956-57 and 1961-62

Type of Business	Establishments		Retail Sales		Retail Stocks at 30 June	
	1956-57	1961-62	1956-57	1961-62	1957	1962
	No.	No.	\$'000	\$'000	\$'000	\$'000
Food stores						
Grocers	2,088	2,011	76,580	97,664	10,882	11,982
Butchers	915	1,034	29,134	33,622	348	370
Fruiters	620	613	12,630	14,342	328	334
Bakers	404	392	11,076	12,678	348	388
Confectioners and milk bars	770	1,059	16,112	23,322	838	1,248
Cafes	104	117	930	984	84	74
Fishmongers and poultryers	125	177	1,960	2,740	46	54
Other food stores	206	252	4,478	6,294	172	260
Hotels, tobacconists, etc.						
Hotels, wine saloons, etc.	641	650	41,686	49,598	1,672	2,194
Tobacconists	106	70	2,648	1,622	256	184
Tobacconists and hairdressers	281	319	2,242	1,618	218	176
Department stores, clothiers, drapers, etc.						
Department stores	9	12	48,924	69,048	8,858	10,490
Clothing and drapers	1,060	988	45,974	45,484	11,072	10,982
Footwear stores	187	209	6,454	7,678	2,096	2,588
Hardware, electrical goods, furniture stores, etc.						
Domestic hardware stores	305	274	4,218	5,276	1,266	1,310
Electrical goods, and musical instrument stores	344	402	13,242	24,418	2,740	4,848
Furniture and floor coverings stores ..	194	184	15,896	14,946	3,578	3,650
Other goods stores						
Chemists	403	466	10,634	18,326	1,924	3,056
Newsagents and booksellers	208	237	5,584	7,026	968	1,302
Sports goods stores	43	64	1,244	1,614	354	454
Watchmakers and jewellers	149	138	3,222	2,954	1,552	1,442
Cycle stores	67	51	922	852	292	340
Florists and nurserymen	93	85	864	1,036	50	50
Other types of business	264	290	4,808	5,132	1,028	1,480
Motor vehicle dealers, garages, etc.						
New motor vehicle dealers, garages and service stations	1,232	1,405	97,030	110,846	10,354	11,422
Used motor vehicle dealers	157	154	24,146	25,826	2,640	3,260
Motor parts and tyre dealers	85	159	4,374	7,762	730	1,468
Total	11,060	11,812	487,012	594,708	64,694	75,406

The next table shows, for the last two censuses, the number of establishments selling goods in each of thirty broad commodity groups and the total value, and value per head of population, of sales in those commodity groups. Adjustments have been made for changes in the scope of the censuses. The number

of establishments shown for each commodity group is the number which recorded any sales in that group.

Some retailers selling small quantities of particular commodities may not have shown those sales separately in their returns; it is unlikely that this has caused significant understatement of the sale of any commodity but the numbers of establishments should be taken as giving only a general indication of the pattern of retail outlets for the various commodity groups. Because many retailers recorded sales in more than one commodity group the numbers of establishments shown against the groups do not add to the total of individual establishments.

Retail Establishments and Sales by Commodity Groups, South Australia
Censuses 1956-57 and 1961-62

Commodity Group	Establishments		Retail Sales of Goods			
			Total		Per Head of Population	
	1956-57	1961-62	1956-57	1961-62	1956-57	1961-62
	No.	No.	\$'000	\$'000	\$	\$
Foodstuffs						
Groceries	3,168	3,480	55,296	71,012	63.80	72.50
Butchers meat	1,006	1,439	29,064	35,198	33.80	35.90
Fresh fruit and vegetables	1,721	2,050	12,812	14,868	14.80	15.20
Bread, cakes and pastry	2,188	2,696	13,294	16,308	15.40	16.60
Confectionery, icecream, softdrinks	3,554	4,172	16,198	20,976	18.80	21.40
Other types of food	1,945	2,491	8,486	12,810	10.00	13.10
Beer, tobacco, etc.						
Beer, wine and spirits	747	740	39,772	47,280	46.20	48.30
Tobacco and cigarettes	5,003	6,046	17,386	21,558	20.20	22.00
Clothing, drapery, etc.						
Clothing:						
Mens and boys	1,115	1,125	21,366	24,182	24.60	24.70
Womens, girls and infants	1,231	1,206	36,434	39,674	41.80	40.50
Drapery, piecegoods, blankets, etc.	928	1,028	13,214	16,792	15.80	17.20
Footwear:						
Mens and boys	835	831	4,148	5,048	4.80	5.20
Womens, girls and infants	761	783	6,968	8,940	8.00	9.10
Hardware (a), electrical goods, etc.						
Domestic hardware	1,478	1,587	11,006	12,298	12.80	12.60
Radios and radiograms	594	487	3,902	3,352	4.60	3.40
Television and accessories (b)		400		7,658		7.80
Musical instruments, records, etc.	266	236	1,990	2,032	2.40	2.10
Domestic refrigerators	539	428	5,288	6,360	6.20	6.50
Other electrical goods	943	945	7,532	11,016	8.80	11.20
Furniture and floor coverings						
Furniture	421	407	12,612	13,900	14.60	14.20
Floor coverings	351	360	6,200	6,724	7.20	6.90
Other goods						
Chemists goods (c)	1,334	1,832	13,052	22,614	15.20	23.10
Newspapers, books and stationery	1,543	1,805	8,680	10,642	10.00	10.90
Sporting requisites, travelgoods	571	656	2,442	3,146	2.80	3.20
Jewellery, watches, clocks, etc.	616	668	4,720	4,904	5.40	5.00
Other goods	888	1,064	10,406	12,272	12.40	12.50
Total (excluding motor vehicles, etc.) .	(e)	(e)	362,268	451,564	420.40	461.10
Motor vehicles, etc. (d)						
Motor vehicles (incl. motor cycles):						
New	305	470	50,518	53,538	58.60	54.70
Used	600	611	36,642	41,436	42.60	42.30
Motor parts, accessories, etc.	1,291	1,531	15,448	17,732	18.00	18.10
Petrol, oil, etc.	1,488	1,715	22,136	30,438	25.60	31.10
Total motor vehicles	(e)	(e)	124,744	143,144	144.80	146.20
Grand Total	11,060	11,812	487,012	594,708	565.20	607.30

(a) Excludes basic building materials and builders hardware and supplies such as tools of trade, paint, etc.

(b) Negligible in 1956-57.

(c) Includes toiletries, cosmetics, and dispensing.

(d) Excludes tractors, farm machinery and implements, earth-moving equipment, etc.

(e) Not appropriate; some establishments make sales in more than one commodity group.

In 1956-57, the value of retail sales per head of population in South Australia was almost the same as the Australian average of \$566, but in 1961-62 the figure for this State (\$607) had fallen well below the corresponding Australian figure of \$644. However, subsequent estimates from the Survey of Retail Establishments indicated that by 1964-65 sales per head of population in South Australia had recovered to about the Australian level but that the 1966-67 figure of \$754 had fallen below the Australian figure of \$801.

In the next table a variation in classification of new motor vehicle sales has affected comparability of the figures. In 1956-57, each sale on commission was attributed to the principal rather than to the agent but in 1961-62 each sale of a new motor vehicle was attributed to the establishment, whether of a principal or an agent, which made the sale to the final consumer. In practice, the 1956-57 procedure probably tended to bias new motor vehicle sales towards the metropolitan area, where principals are mainly located.

Retail Establishments, Sales and Stocks, Statistical Divisions

Censuses 1956-57 and 1961-62

Statistical Division	Establishments		Retail Sales		Retail Stocks at 30 June	
	1956-57	1961-62	1956-57	1961-62	1957	1962
	No.	No.	\$'000	\$'000	\$'000	\$'000
Metropolitan (a)						
Municipality of Adelaide	1,491	1,490	177,522	195,896	27,050	29,378
Other metropolitan	5,150	5,485	151,600	203,794	15,072	19,430
Total metropolitan	6,641	6,975	329,122	399,690	42,122	48,808
Central	1,552	1,757	45,764	61,958	5,776	7,296
Lower North	792	769	26,804	28,282	4,558	4,656
Upper North (b)	376	378	14,872	16,350	1,854	2,258
South Eastern	581	690	27,444	32,798	4,040	4,706
Western	501	568	19,414	26,662	2,866	3,650
Murray Mallee	617	675	23,592	28,968	3,478	4,032
Total State	11,060	11,812	487,012	594,708	64,694	75,406

(a) As defined for Census purposes prior to 30 June, 1966.

(b) Including 'Remainder of State'.

Surveys of Retail Establishments

During periods between censuses, estimates of the value of retail sales are calculated from returns received from a sample of retail establishments covering businesses which account for approximately 45 per cent of all retail sales in Australia.

The following table shows the value of retail sales of goods in South Australia in broad commodity groups in each of the years 1962-63 to 1966-67.

During this period the value of sales of the food and groceries group as a proportion of total sales declined from 27.3 per cent in 1962-63 to 26.3 per cent in 1964-65. By 1966-67 it had recovered to 28.4 per cent. Whilst the motor vehicle group increased from 27.3 per cent in 1962-63 to 29.2 per cent in 1964-65 it had declined by 1966-67 to 25.2 per cent.

Value of Retail Sales: Commodity Groups, South Australia

Commodity Group	Value of Retail Sales of Goods				
	1962-63	1963-64	1964-65	1965-66	1966-67
	\$ million				
Groceries.....	74.8	79.8	86.7	93.2	99.0
Butchers meat	38.2	42.6	45.6	48.5	50.0
Other food	67.1	72.9	80.3	83.7	87.4
Total food and groceries	180.1	195.3	212.6	225.4	236.4
Beer, wine and spirits	49.6	53.5	57.2	62.6	65.7
Clothing, drapery, etc.	87.2	95.7	103.7	103.8	106.5
Footwear	14.4	15.2	16.1	16.5	17.3
Hardware, china, etc.	12.8	13.0	14.6	15.7	16.9
Electrical goods	34.0	38.6	42.4	40.8	40.2
Furniture and floor coverings ...	22.6	25.5	29.3	30.8	30.6
Chemists goods (a)	24.3	26.0	28.6	31.6	33.3
Other goods (b)	54.8	60.9	67.1	71.1	76.1
Total excluding motor vehicles, etc.	479.8	523.7	571.6	598.3	623.0
Motor vehicles, parts, petrol, etc..	180.5	211.5	236.3	217.6	209.5
Total	660.3	735.2	807.9	815.9	832.5

NOTE : Builders hardware and supplies, basic building materials, farm and business machines, earth moving equipment, and grain, feed and fertilisers are excluded.

(a) Includes toiletries, cosmetics, and dispensing.

(b) Includes tobacco, cigarettes, jewellery, sporting goods, etc.

WHOLESALE TRADE

Some indication of the volume of wholesale trade in South Australia is given by statistics collected under Commonwealth Sales Tax Acts. However, the statistics do not relate to all wholesale trade and do not necessarily cover a constant portion of such trade because vendors trading in exempt goods only are not required to furnish returns.

Wholesale Sales Recorded Under Sales Tax Acts, South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Gross taxable sales					
At a tax rate of:					
2½ per cent	37,673	41,374	44,260	42,037	47,234
12½ per cent	108,289	104,846	111,726	113,805	114,300
22½ per cent	42,753	52,023	9,530	—	—
25 per cent	14,008	14,993	64,804	65,272	62,120
Exempt sales	435,520	487,098	563,822	570,170	557,775
Total sales	638,243	700,334	794,142	791,284	781,429

10.2 OVERSEAS TRADE

LEGISLATION AFFECTING OVERSEAS TRADE

The power to make laws with respect to trade and commerce with other countries was conferred on the Commonwealth Parliament by the Commonwealth of Australia Constitution Act, Section 51 (i). Under Section 86 of the Constitution, the collection and control of duties of customs and excise passed to the Executive Government of the Commonwealth on 1 January 1901. Other references to trade and commerce are contained in Sections 87 to 95 of the Constitution.

The Commonwealth legislation affecting overseas trade includes the Customs Act, the Customs Tariff, and the Customs Tariff (Dumping and Subsidies) Act. The Customs Act is the administrative Act under which the Department of Customs and Excise operates, while the Customs Tariff provides the statutory authority for imposing the actual rates of duty operative from time to time and the Customs Tariff (Dumping and Subsidies) Act provides protection for Australian industry against various forms of unfair trading.

The Customs Tariff

The first Commonwealth Customs Tariff was introduced by Resolution on 8 October 1901 from which date uniform duties for each State came into effect throughout Australia. The tariff has since been extensively amended.

On 1 July 1965 the Australian tariff was re-issued in Brussels Nomenclature form. The new form of the tariff is claimed to have the following advantages:

- (a) it provides a permanent framework for future amendments and expansion of the tariff, and
- (b) the nomenclature has been adopted by a large number of countries, providing a uniform method of classifying commodities in international trade.

The Australian Customs Tariff has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting preferential treatment to certain imports from certain countries of the Commonwealth. Duties are also imposed on some goods, generally of a luxury nature, for revenue purposes. Customs collections are a major source of revenue, but in its protective character the tariff has an important influence on the Australian economy.

Australia has two classes of tariff; the Preferential Tariff and the General Tariff.

The Preferential Tariff rates of duty apply to goods the produce or manufacture of the United Kingdom, provided that such goods comply with the laws and statutory regulations in force at the time affecting the grant of preference, and that the intended destination of the goods, when originally shipped from the United Kingdom, was Australia.

The Preferential Tariff also applies to the Republic of Ireland and, with the exception of a relatively small number of commodities which carry special rates of duty, to Canada, New Zealand (except Cook Islands) and the Territory of Papua and New Guinea. In relation to certain goods, the Preferential Tariff also applies to specified countries of the Commonwealth and most of the British non-self-governing colonies, protectorates and trust territories.

The General Tariff applies to goods other than those to which the Preferential Tariff applies.

Primage Duties

In addition to the duties imposed by the Customs Tariff, *ad valorem* primage duties at rates of 5 per cent or 10 per cent are charged on some goods according to the type of goods and origin thereof. Other goods are exempt from primage duty. Goods the produce or manufacture of New Zealand, Norfolk Island, Fiji, Cocos Islands, Christmas Island and the Territory of Papua and New Guinea are also exempt from primage duty.

Anti-dumping Legislation

The *Customs Tariff (Dumping and Subsidies) Act* 1961-1965 provides protection for Australian industry against various forms of unfair trading. Under this Act a dumping duty may be imposed on goods that are sold to Australia at an export price which is less than the normal value of the goods or a countervailing duty on subsidised goods, where the dumping or subsidisation causes or threatens material injury to an Australian industry.

Special duties may be collected also if dumped or subsidised goods are imported to the detriment of the trade of a third country in the Australian market.

Import Controls

A system of import licensing introduced in 1939, as a war-time measure, provided that goods could not be imported into Australia unless a licence had been issued or they had been specifically exempted from control.

The controls were progressively relaxed during the post-war years but were subsequently re-imposed in 1952 as a result of a serious deterioration in Australia's external financial position. These controls were imposed on imports from all sources except Papua, New Guinea and Norfolk Island.

The object of import licensing was to limit the value of imports to an annual rate determined by the government in order that payments for imports would not involve an excessive drawing on Australia's international reserves.

The import licensing controls have since been removed with the exception of some goods retained under control for reasons associated with the protection of certain Australian industries.

The Customs (Prohibited Imports) Regulations, list those commodities whose importation is prohibited absolutely, or restricted, on social grounds. Other items are prohibited, or restricted, on health grounds (human, animal or plant) by the *Quarantine Act* 1908-1966 and the *Therapeutic Goods Act* 1966.

Export Controls

Under Section 112 of the Customs Act the exportation of goods from Australia, may be (a) prohibited absolutely, (b) prohibited to a specified place, or (c) prohibited unless prescribed conditions or restrictions are complied with.

The *Banking Act* 1959-1967 contains provision to ensure that the full proceeds of goods exported from Australia are received into the Australian banking system and that these proceeds are received in the currency and in the manner prescribed by the Reserve Bank of Australia.

ADVISORY AUTHORITIES ON OVERSEAS TRADE

Tariff Board

The *Tariff Board Act* 1921-1967 provides for the appointment of a Tariff Board consisting of eight members. Of these, two must, and three may, be members of the Commonwealth Public Service at the time of their original appointment. The purpose of the Tariff Board is to advise the Government on matters relating to the protection and encouragement of Australian industry.

The Minister for Trade and Industry is required to refer to the Board for inquiry and report the following matters: the necessity for new, increased, or reduced duties; the necessity for granting bounties and the effect of existing bounties; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the tariff or by the restriction of the importation of any goods by charging unnecessarily high prices for his goods or acting in restraint of trade.

In addition, the Minister may refer the following matters to the Tariff Board for inquiry and report: the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the Customs laws on the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and other matters affecting the encouragement of primary and secondary industries in relation to the tariff.

The Minister for Customs and Excise may refer to the Tariff Board for inquiry and report the following matters: the classification of goods in the Customs Tariff or Excise Tariff and matters in connection with the interpretation of these tariffs; the question of the value for duty of goods; whether goods not prescribed in departmental by-laws should be so prescribed; and any matters in respect of which action may be taken under the *Customs Tariff (Dumping and Subsidies) Act 1961-1965*.

Special Advisory Authority

The Minister for Trade and Industry may also request a Special Advisory Authority to inquire into cases where urgent action appears necessary to protect an Australian industry against import competition pending receipt and consideration of a full report by the Tariff Board. The Special Advisory Authority's report must be submitted to the Minister within thirty days of the making of the request. Temporary protection recommended by a Special Advisory Authority may be imposed, but may only operate for a period of up to three months after the date of receipt of the final report by the Tariff Board on the goods concerned.

ENCOURAGEMENT OF OVERSEAS TRADE

Trade Commissioner Service

The *Trade Commissioners Act 1933-1936* provides for the appointment of one or more Trade Commissioners and Assistant Trade Commissioners of the Commonwealth in such places as the Governor-General determines.

In 1957 Australia's official commercial representation was extended by the introduction of a system of Trade Correspondents. These correspondents, who are appointed in countries where there is no Trade Commission, are engaged on a part-time basis and operate under the general direction of the Trade Commissioner in whose area they are located.

The Trade Commissioner Service is administered by the Commonwealth Department of Trade and Industry and is responsible for overseas commercial intelligence. Particular facilities offered to Australian exporters and export organisations include: market surveys, advice on selling and advertising methods, arranging introductions with buyers and agents, providing reports on the standing of overseas firms, assisting business visitors and organising trade missions, trade displays and other publicity and promotion media.

In some countries, Trade Commissioners participate in inter-governmental negotiations on economic and commercial matters. A Trade Commissioner may also be called upon to act as the Australian Government representative in those countries where there is no Australian diplomatic or consular mission.

Export Payments Insurance

The *Export Payments Insurance Corporation Act 1956-1966* established the Corporation with the objective of protecting Australian exporters against risks of loss arising from non-payment of their overseas accounts. The main risks of loss against which the Corporation insures are the 'commercial' risks of the insolvency or protracted default of the buyer, and 'political' risks, such as war or cancellation of a valid import licence. More recently, in 1965, the scope of the Corporation was widened to include the ability to insure Australian investments in overseas countries against, broadly, three types of 'political risks': expropriation; inability to transfer currencies; and damage as the result of war or insurrection.

Export Incentives

The Commonwealth Government provides taxation concessions as financial incentives to export. A special income tax allowance for export market development expenditure is designed to encourage firms to incur promotion expenditure in advance of export sales and to assist exporters and potential exporters to expand sales in the existing markets and to enter new overseas markets. Rebates of payroll tax are also granted to employers whose export sales of goods or property rights have increased above their average annual level in a base period.

TRADE AGREEMENTS

Australia has entered into a number of trade agreements with various countries to obtain, in general, preferential rates of duty for a range of Australian commodities in those countries and in turn has contracted to extend preferential treatment to a range of commodities entering Australia from those countries. In terms of the annual value of trade, the principal agreements are with the United Kingdom, Canada, New Zealand, Japan, and the Federal Republic of Germany.

The General Agreement on Tariffs and Trade (G.A.T.T.), of which Australia is an original member, is an international trade agreement which has been in operation since 1 January 1948. The objectives of the G.A.T.T. include the expansion of world trade and the raising of living standards throughout the world. The essential features of the G.A.T.T. are the schedules of tariff concessions which its members have agreed to apply consequent to tariff negotiations with each other, the application of most-favoured-nation treatment among its members, the avoidance of trade discrimination, and a code of agreed commercial policy rules for fair international trading.

Five series of tariff negotiations have been conducted, as a result of which Australia has obtained tariff concessions on almost all the principal products of which it is an actual or potential exporter to the individual countries concerned. A sixth series of tariff negotiations, the Kennedy Round, based on a plan for linear tariff cuts on all classes of products, including agricultural and primary products with a minimum of exceptions, and on a reduction of non-tariff barriers to trade, began in May 1964 and concluded in May 1967. Agreement was reached on a higher minimum world price for wheat and on the gradual reduction in tariff duties on many other commodities.

METHOD OF RECORDING IMPORTS AND EXPORTS

Overseas trade statistics are compiled from documents obtained under the *Customs Act 1901-1967*. Statistics for South Australia apply to the imports into

and exports from Australia which are recorded at South Australian ports. Imports do not provide a record of the overseas goods used or consumed in South Australia, as some of the goods pass subsequently to other Australian States and some goods imported through other States pass into South Australia. Similarly, exports include products of other States shipped overseas from South Australian ports, but exclude products of South Australia shipped overseas from ports in other States. Commodities which have entered or have been cleared from South Australia by sea, air or parcels post are included.

On 1 July 1965, concurrent with the introduction of the Australian Brussels-type Tariff, the new Australian Import Commodity Classification, based on the United Nations' Standard International Trade Classification (S.I.T.C.) Revised, was introduced. The new Australian Export Commodity Classification, also based on S.I.T.C., Revised, came into operation on 1 July 1966. Details of both overseas imports and exports which follow have been compiled in terms of the new classifications. Where individual items are shown the figures are comparable for all years. For groups of commodities, however, there may be some break in continuity because it has not been possible to identify in the old classifications all of the components of the new classification groups.

Recorded values of imports are 'transaction value (f.o.b.)' or 'domestic value (f.o.b.)', whichever is the higher. These values are f.o.b. port of shipment Australian currency. The definition of f.o.b. values adopted for exports generally are:

- (a) For goods sold to overseas buyers before export—the Australian f.o.b. port of shipment equivalent of the price at which the goods were sold.
- (b) For goods shipped on consignment—the Australian f.o.b. port of shipment equivalent of the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods were dispatched for sale. For wool the f.o.b. port of shipment equivalent of the current price ruling in Australia will normally provide a sufficient approximation to the f.o.b. port of shipment equivalent of the price ultimately received.

Inclusions and Exclusions

Export tabulations do not include the value of stores loaded on aircraft and ships (e.g. aircraft fuel, bunker oil, food and drink for passengers and crew, and ships' fittings installed on overseas-owned ships in Australian ports). Outside packages (containers, crates) are included as a separate item in imports. For exports, however, the value recorded for each item includes the value of the outside package. Particulars of direct transit trade through Australia are not recorded.

Countries

'Country of origin' appearing in import tables should be taken to mean the country of production. 'Country of consignment' appearing in export tables means the country to which goods were consigned so far as this can be determined at the time of export. Where the country of consignment is not determined at the time of export, goods are shown as exported 'For Orders'.

OVERSEAS TRADE OF SOUTH AUSTRALIA IMPORTS

The total value of direct overseas imports into South Australia has risen considerably in the last five years. Imports exceeded \$200 million for the first time in 1964-65 but have been slightly below that figure during the last two years.

Imports of crude oil following the completion of Port Stanvac refinery and imports of 'Machinery and transport equipment' have been major factors contributing to the increased then sustained high level of imports shown in the following table. All commodity group figures for years prior to 1965-66 should be regarded as estimates only; in some cases it has been necessary to combine groups to achieve reasonable comparability.

Direct Overseas Imports to South Australia: Principal Commodity Groups

Commodity Group	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Food and live animals	3,545	3,798	4,449	4,650	5,130
Beverages and tobacco	455	592	660	683	618
Crude materials, inedible:					
Crude rubber	725	740	971	1,264	1,292
Wood, timber and cork	4,869	6,448	7,336	6,047	5,031
Textile fibres and waste	3,172	4,450	4,374	2,177	1,500
Crude fertilisers, crude minerals	2,162	2,550	4,098	4,102	5,763
Other	1,713	1,824	2,042	1,893	1,987
Mineral fuels, lubricants	10,980	20,893	22,228	24,570	26,844
Animal and vegetable oils and fats	1,024	608	578	690	596
Chemicals:					
Chemical elements and com- pounds	6,707	7,258	8,514	2,187	2,935
Plastics and artificial resins ...				2,200	1,954
Other				3,838	4,388
Manufactured goods:					
Paper and paperboard manu- factures	4,087	4,169	5,046	4,720	4,109
Yarn, fabrics and made-up articles	10,058	10,561	11,723	12,955	11,217
Non-metallic mineral manu- factures, n.e.s.	4,926	4,635	5,598	7,309	6,996
Iron and steel	5,148	6,820	12,030	7,464	4,278
Manufactures of metal, n.e.s. .	(a)	(a)	(a)	4,873	7,237
Machinery and transport equip- ment:					
Machinery, other than electric .	64,944	86,372	92,955	44,898	42,926
Electrical machinery and appliances				16,095	16,610
Transport equipment				29,699	26,739
Miscellaneous manufactured articles	6,734	7,392	8,937	8,543	9,410
Commodities and transactions not classified to kind	8,577	10,540	13,317	7,298	9,210
Total	139,826	179,651	204,856	198,156	196,771

(a) Included with machinery and transport equipment.

Imports from United States of America have exceeded those from United Kingdom in each of the last four years. In 1953-54 the United Kingdom supplied over half of the direct imports to South Australia, but subsequently there has been a steady decline to 21.6 per cent in 1966-67. In the years immediately prior to 1960-61 imports from the United States of America represented about 10 to 12 per cent of total imports. In 1963-64 and 1964-65 the proportion had increased to about 30 per cent and has been between 27 per cent and 28 per cent for the last two years.

Direct Overseas Imports to South Australia: Principal Countries

Country of Origin	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Canada	9,463	9,715	11,185	11,484	9,769
France	4,648	3,325	1,693	2,167	3,944
Germany, Federal Republic of	5,752	7,259	8,817	9,747	7,364
India	3,374	3,218	4,734	4,130	2,949
Italy	1,731	1,557	2,028	2,064	2,958
Japan	5,685	8,440	16,399	13,544	15,140
Malaysia	1,579	2,107	3,340	1,892	1,758
Netherlands	3,445	3,294	4,524	4,663	4,680
New Zealand	1,756	2,169	2,380	2,323	1,946
Pakistan	2,134	2,673	1,556	3,172	3,121
Saudi Arabia	5,377	16,985	18,012	21,777	23,802
Sweden	2,098	2,990	2,649	3,259	2,885
United Kingdom	44,352	44,296	48,596	46,215	42,577
United States of America	31,937	54,810	59,655	53,997	54,542
Other	16,495	16,813	19,288	17,722	19,336
Total	139,826	179,651	204,856	198,156	196,771

The following table shows by commodity groups the imports from principal countries during the year 1966-67.

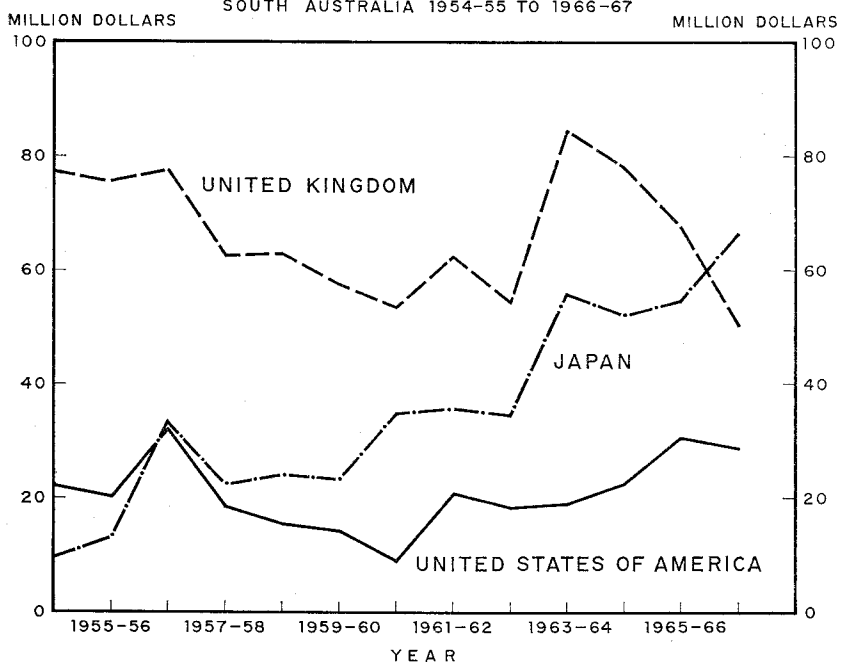
**Direct Overseas Imports to South Australia from Principal Countries
Commodity Groups, 1966-67**

Commodity Group	Canada	Japan	Saudi Arabia	United Kingdom	U.S.A.	Other	Total
	\$'000						
Food and live animals:							
Fish and fish preparations	205	361	—	538	15	630	1,749
Coffee, tea, cocoa, spices	—	56	—	13	16	1,135	1,220
Other	42	13	—	506	320	1,279	2,160
Beverages and tobacco	—	—	—	397	19	202	618
Crude materials, inedible:							
Crude rubber	122	1	—	79	436	654	1,292
Wood, timber and cork	2,390	1	—	3	1,306	1,331	5,031
Textile fibres and waste	—	238	—	3	449	810	1,500
Crude fertilisers and crude minerals	392	93	—	40	1,232	4,006	5,763
Other	127	1	—	34	140	1,685	1,987
Mineral fuels, lubricants	—	—	23,802	99	261	2,682	26,844
Animal and vegetable oils and fats	10	48	—	85	83	370	596
Chemicals:							
Chemical elements and compounds	58	894	—	510	511	962	2,935
Plastic materials and artificial resins	50	110	—	752	462	580	1,954
Other	117	99	—	1,701	1,304	1,167	4,388
Manufactured goods:							
Rubber manufactures	5	332	—	746	204	411	1,698
Paper, paper board and manufactures	1,275	201	—	366	121	2,146	4,109
Textile yarn, fabrics, made up articles	253	1,795	—	1,435	482	7,252	11,217
Non-metallic mineral manufactures, n.e.s.	51	759	—	1,784	447	2,257	5,298
Iron and steel	781	1,536	—	825	281	855	4,278
Non-ferrous metals	348	30	—	349	243	348	1,318
Manufactures of metal, n.e.s.	359	1,410	—	1,534	1,412	1,204	5,919
Machinery and transport equipment:							
Machinery, other than electric	906	1,362	—	12,690	22,450	5,518	42,926
Electrical machinery and appliances	356	1,956	—	4,819	2,576	6,903	16,610
Transport equipment	1,644	2,448	—	6,210	14,627	1,810	26,739
Miscellaneous manufactured articles	80	1,043	—	4,523	1,554	2,210	9,410
Commodities and transactions not classified to kind	198	350	—	2,536	3,591	2,535	9,210
Total	9,769	15,140	23,802	42,577	54,542	50,941	196,771

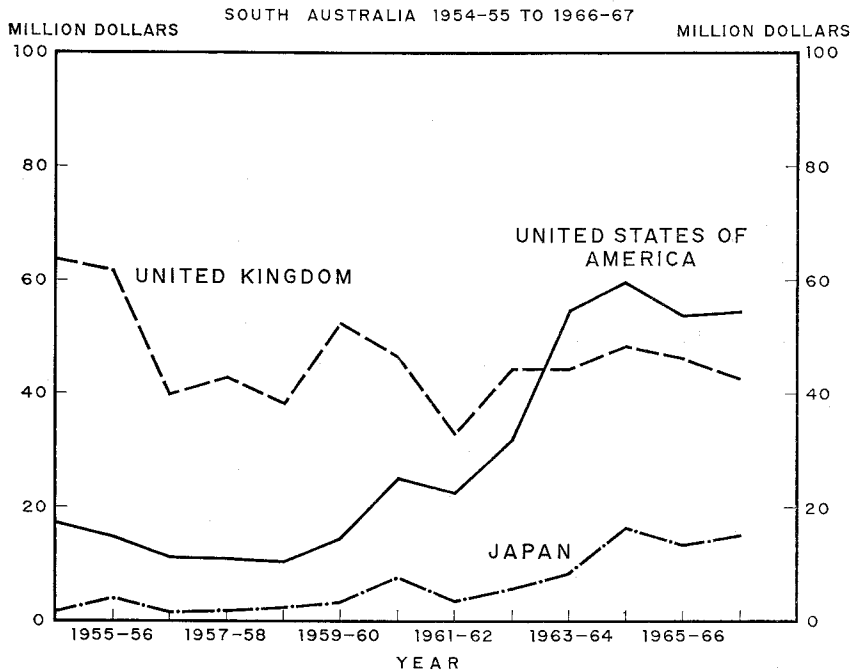
EXPORTS

The value of direct overseas exports from South Australia reached a record level of \$325.2 million in 1966-67. The previous highest was \$322.2 million in 1963-64 when exports of wheat were high in both quantity and value and the value for wool was relatively high. In 1966-67 the values for wheat and wool, although below the 1963-64 figures, were higher than in the two intervening years.

DIRECT OVERSEAS EXPORTS THREE PRINCIPAL COUNTRIES



DIRECT OVERSEAS IMPORTS THREE PRINCIPAL COUNTRIES



Direct Overseas Exports from South Australia: Principal Commodities

Commodity	1962-63	1963-64	1964-65	1965-66	1966-67
	QUANTITIES ('000)				
Wheat (bushel)	18,509	48,658	33,782	29,128	33,574
Barley (bushel)	6,875	13,450	12,894	6,202	11,357
Fruit; preserved and pulped (lb) .	14,884	28,613	29,809	46,340	49,029
Wool:					
Greasy (lb).....	151,999	163,298	164,358	172,439	173,563
Other (lb)	15,526	14,624	11,652	12,727	12,881
	VALUE (\$'000)				
Wheat	27,086	70,704	48,107	41,855	52,082
Barley	6,968	13,828	15,247	7,050	13,056
Fruit; Preserved and pulped	1,775	3,406	3,521	5,378	5,725
Wool:					
Greasy	72,482	95,037	83,410	84,932	88,110
Other.....	10,916	12,360	9,124	9,555	9,904

Exports of manufactured goods are increasing both in absolute terms and as a proportion of total exports but the bulk of exports is still of goods normally classified as primary products. In 1966-67 the 'Food and live animals' group accounted for \$98.7 million, or 30.4 per cent of exports (including wheat \$52.1 million, 16.0 per cent) and 'Crude materials, inedible' for \$151.8 million, or 46.7 per cent (including wool \$98.0 million, 30.1 per cent).

In the table which follows, figures for years prior to 1966-67 should be regarded as estimates only.

Direct Overseas Exports from South Australia: Principal Commodity Groups

Commodity Group	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Food and live animals:					
Meat and meat preparations	5,908	4,365	4,569	5,771	8,275
Dairy products and eggs	2,115	3,901	3,841	3,739	4,396
Cereal grains and cereal preparations ..	40,066	91,098	69,757	53,534	69,987
Fruit and vegetables	8,364	12,106	12,122	14,107	12,733
Other	1,656	2,463	2,717	4,298	3,313
Beverages and tobacco	2,832	2,817	3,608	3,607	3,168
Crude materials, inedible (except fuels):					
Hides and skins	8,076	9,705	8,322	9,132	8,616
Textile fibres and their waste	83,465	107,446	92,632	94,565	98,061
Metalliferous ores and metal scrap	23,247	28,331	37,767	38,970	41,229
Other	1,351	2,259	2,362	2,354	2,534
Mineral fuels, lubricant	396	1,290	769	497	1,335
Animal and vegetable oils and fats	1,104	1,175	1,690	1,283	1,382
Chemicals	923	348	422	394	390
Manufactured goods:					
Iron and steel	2,040	998	1,078	2,762	11,476
Non-ferrous metals	22,610	36,876	43,903	41,668	37,100
Manufactures of metals, n.e.s.	(a)	(a)	(a)	(a)	2,872
Non-metallic manufactures	622	552	618	718	605
Machinery and transport equipment	6,427	14,937	14,236	15,709	15,275
Miscellaneous manufactured articles	504	357	486	366	903
Commodities and transactions not classified to kind	1,239	1,136	1,343	2,802	1,520
Total	212,945	322,159	302,242	296,275	325,170

(a) Included with machinery and transport equipment.

The following table shows the value of exports to principal countries during each of the years 1962-63 to 1966-67. In 1966-67 Japan, taking 20.4 per cent of exports, replaced United Kingdom (15.5 per cent) as the principal market for direct exports from South Australia. This percentage of exports going to United Kingdom is the lowest ever recorded while that for Japan is the highest. Exports to United States of America decreased from \$30.7 million (10.4 per cent of total) in 1965-66 to \$28.8 million (8.9 per cent) in 1966-67.

Direct Overseas Exports from South Australia: Principal Countries

Country of Consignment	1962-63	1963-64	1964-65	1965-66	1966-67
			\$'000		
Belgium-Luxembourg	6,426	10,565	14,513	11,533	13,307
Canada	3,775	4,029	4,585	4,617	4,571
China, Republic of—Mainland	2,074	9,879	6,670	6,321	1,460
France	12,735	16,622	12,140	15,032	12,696
Germany, Federal Republic of	6,023	8,914	8,217	10,592	7,813
India	4,207	6,597	6,368	4,565	10,526
Italy	8,595	9,957	6,250	8,650	13,387
Japan	34,464	55,799	52,033	54,462	66,430
Kuwait	1,418	1,506	2,099	2,343	4,300
Lebanon	3,215	5,914	779	78	4,382
New Zealand	9,570	15,332	15,293	17,450	15,299
Norway	4,286	6,077	4,071	81	5,009
Saudi Arabia	901	1,477	2,037	1,536	4,098
South Africa	2,175	2,650	3,355	5,795	9,034
United Kingdom	54,210	84,460	78,014	67,594	50,278
United States of America	18,213	19,004	22,633	30,716	28,776
U.S.S.R.	4,394	17,441	22,505	4,675	3,595
Other	36,264	45,936	40,680	50,236	70,209
Total	212,945	322,159	302,242	296,276	325,170

Exports to principal countries during the year 1966-67 classified by commodity groups are shown below.

Direct Overseas Exports from South Australia to Principal Countries Commodity Groups, 1966-67

Commodity Group	Belgium-Luxembourg	Italy	Japan	New Zealand	United Kingdom	U.S.A.	Other	Total
					\$'000			
Food and live animals:								
Meat and meat preparations ..	..	15	838	..	1,131	4,883	1,408	8,275
Dairy products and eggs ..	..	..	1,429	..	1,379	..	1,588	4,396
Fish and fish preparations ..	3	142	7	..	..	1,247	280	1,679
Cereal grains and cereal preparations	115	3,721	5,952	529	3,276	..	56,394	69,987
Fruit and vegetables	62	54	66	1,219	4,843	239	6,250	12,733
Other	1	..	11	12	187	..	1,422	1,633
Beverages and tobacco .....	..	1	27	183	1,497	11	1,449	3,168
Crude materials, inedible:								
Hides, skins and fur skins ..	..	2,161	296	..	277	10	5,872	8,616
Textile fibres and their waste ..	5,491	5,224	34,162	106	10,123	7,364	35,591	98,061
Metalliferous ores and metal scrap	7,555	1,321	17,438	..	12,352	1,786	777	41,229
Other .....	..	45	394	853	306	140	796	2,534
Mineral fuels and lubricants ..	..	..	..	519	1	..	815	1,335
Animal and vegetable oils and fats .....	..	..	35	..	125	11	1,211	1,382
Chemicals .....	..	2	..	298	17	2	71	390
Manufactured goods classified chiefly by material:								
Non-ferrous metal manufactures	69	627	1,318	1,343	12,696	12,116	8,931	37,100
Other .....	..	5	4,316	1,323	999	333	7,977	14,953
Machinery and transport equipment:								
Machinery, other than electric	9	33	14	548	99	42	1,026	1,771
Electrical machinery and appliances .....	..	1	19	514	53	43	444	1,074
Transport equipment .....	..	..	19	7,476	526	31	4,379	12,431
Miscellaneous manufactured articles .....	..	14	22	161	120	308	278	903
Commodities and transactions not classified to kind	1	21	65	214	271	211	737	1,520
Total	13,307	13,387	66,430	15,299	50,278	28,776	137,693	325,170

.. Nil or less than \$500.

Exports of Wool

In 1960-61 Japan replaced the United Kingdom as the principal market for wool exported from South Australia, and in 1966-67 approximately 35 per cent of wool exports went to Japan compared with little more than 10 per cent to United Kingdom. Exports of wool to U.S.S.R. and to Mainland China have shown marked fluctuations.

Direct Overseas Exports of Wool from South Australia

Country of Consignment	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Belgium-Luxembourg	4,299	5,824	5,489	4,010	5,491
China, Republic of—Mainland ..	872	3,448	1,425	281	585
France	6,660	8,902	6,125	8,064	6,839
Germany, Federal Republic of ..	3,492	4,864	4,700	5,436	5,286
Italy	4,956	5,880	3,512	4,999	5,219
Japan	21,928	35,014	25,404	34,319	34,157
Poland	2,270	1,818	1,827	2,512	2,818
United Kingdom	15,144	19,014	15,504	10,671	10,123
U.S.A.	5,662	4,514	6,357	9,024	7,364
U.S.S.R.	4,378	3,508	8,181	1,808	3,592
Other	13,739	14,610	14,011	13,362	16,539
Total	83,400	107,396	92,535	94,486	98,013

Exports of Wheat

The total amount of wheat exported from South Australia fluctuates considerably from year to year, depending on the success of the harvest. The value of wheat exported was at a record level in 1963-64. Values have since been lower but the 1966-67 and 1964-65 figures were respectively the second and third highest recorded.

The principal countries of consignment also show marked variations over time; a feature of exports has been the large quantities of wheat shipped to U.S.S.R. in the years 1963-64 and 1964-65.

Direct Overseas Exports of Wheat from South Australia

Country of Consignment	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
China, Republic of—Mainland ..	1,162	6,378	4,904	5,922	11,308
Germany, Federal Republic of ..	1,402	2,638	—	337	—
Iran	1,046	468	5,736	2,561	1,009
Iraq	—	2,462	1,028	68	2,514
Lebanon	3,178	5,904	752	—	4,359
New Zealand	2,694	—	740	2,071	528
Norway	5,996	5,804	3,904	—	4,664
South Africa	—	—	3	3,317	5,584
South Arabia	1,009	1,732	2,097	2,801	2,459
United Kingdom	7,160	22,430	8,716	9,910	2,675
U.S.S.R.	6	12,716	14,324	2,867	—
Other	3,433	10,172	5,903	12,001	16,982
Total	27,086	70,704	48,107	41,855	52,082

TRADE AT PRINCIPAL PORTS

The following table shows the value of imports and exports at the principal ports during each of the years 1962-63 to 1966-67.

Over 80 per cent of imports are unloaded at Port Adelaide but the proportion of exports loaded there is much lower and in recent years has been less than 60 per cent. Exports from Port Pirie principally comprise pig-lead and concentrates and ores (the produce of Broken Hill) and wheat. Shipments of wheat, and to a lesser extent barley, constitute the major part of exports from Port Lincoln, Wallaroo, Ardrossan and Thevenard, while the principal commodity exported from Port Augusta is copper concentrate from the Northern Territory.

Value of Overseas Trade: Principal Ports, South Australia

Port	1962-63	1963-64	1964-65	1965-66	1966-67
IMPORTS (\$'000)					
Cape Thevenard	—	—	—	—	2
Port Adelaide (a)	135,153	171,373	197,968	162,775	164,301
Port Augusta	5	2	6	1	1
Port Lincoln	684	1,231	1,284	1,361	1,740
Port Pirie (including Port Germein)	474	1,306	316	52	713
Port Stanvac	(b)	(b)	(b)	22,666	24,600
Wallaroo	593	776	1,038	1,146	1,119
Whyalla	2,917	4,963	4,244	10,155	4,295
Total	139,826	179,651	204,856	198,156	196,771
EXPORTS (\$'000)					
Ardrossan	4,805	10,283	9,686	7,094	9,069
Cape Thevenard	4,204	7,129	7,540	4,566	7,706
Edithburgh	379	372	182	101	117
Port Adelaide (a)	137,382	193,406	172,398	177,068	185,908
Port Augusta	4,337	4,503	5,742	4,693	9,596
Port Lincoln	8,941	24,965	16,628	16,720	24,566
Port Pirie (including Port Germein)	41,152	64,364	77,908	77,641	66,882
Port Stanvac	(b)	(b)	(b)	336	1,251
Wallaroo	9,865	16,390	10,842	5,546	8,323
Whyalla	1,881	747	1,316	2,511	11,752
Total	212,945	322,159	302,242	296,276	325,170

(a) Includes 'Parcels Post, Adelaide'; 'Adelaide City (including Adelaide Airport)'; Port Stanvac prior to 1965-66, and from 1965-66 Stenhouse Bay.

(b) Included in Port Adelaide.

Some details of shipping arrivals at the various South Australian ports are given on pages 495-6.

CUSTOMS AND EXCISE DUTY

Excise duty is levied on specific goods of Australian manufacture, principally for the purpose of raising revenue. Although these excise goods do not form a part of overseas trade, the rate of excise duty is in some cases related to the import duty on similar goods.

The following table gives details of the value of customs duty and excise duty collected in South Australia during the years 1965-66 and 1966-67.

Customs and Excise: Net Revenue, South Australia

Customs Tariff and Excise Tariff Item	1965-66	1966-67
	\$'000	
CUSTOMS		
Live animals; animal products.....	51	54
Vegetable products	76	69
Animal and vegetable oils and fats	76	105
Prepared foodstuffs; beverages, vinegar; tobacco:		
Spiritous and alcoholic preparations	816	1,087
Tobacco, cigarettes, etc.....	1,127	875
Other	130	142
Automotive spirit and other mineral products	1,276	1,716
Chemicals and products thereof	266	293
Plastics, resins, rubber and manufactures thereof	605	569
Hides, skins, leather and articles thereof	58	73
Wood and wicker	1,110	913
Paper-making material; paper and paper manufactures	258	295
Textiles	1,190	1,010
Footwear, sunshades, whips, artificial flowers, etc.	90	126
Earthenware, cement, china, etc.	496	486
Pearls, precious stones and metals, imitation jewellery, coin, etc.	37	27
Base metals and articles thereof	965	969
Electrical and mechanical machines and machinery	3,141	2,772
Transport equipment and parts therefor	1,924	2,274
Optical, surgical and scientific instruments, etc.	320	330
Arms and ammunition and parts therefor	57	73
Miscellaneous manufactured articles	419	446
Works of art, antiques, etc.	1	1
Other customs revenue.....	240	248
Primage	274	275
Total net customs and primage duties	15,002	15,228
EXCISE		
Petroleum products	20,980	22,625
Spirits	3,316	3,614
Tobacco, cigars and cigarettes	14,110	15,184
Other	23,889	24,466
Total net excise duties	62,295	65,889
Total net customs, primage and excise revenue ...	77,297	81,117

Because a new Australian Customs Tariff was introduced in July 1965 figures comparable with the dissection in the preceding table are not available for earlier years. However, the totals of net Customs and Excise revenue for the last five years appear in the table of Commonwealth Taxation on page 520.

10.3 PRICES**MEASUREMENTS OF PRICE MOVEMENTS**

The prices of a wide range of commodities and services are collected at regular intervals by the Commonwealth Statistician for the purpose of compiling retail price indexes. These indexes aim to measure the degree of change in price levels, or more specifically the proportionate change in the aggregate cost of specified quantities and qualities of a selected list of items.

As these indexes are used to measure changes and not aggregates it is traditional for presentation purposes to select a certain year, known as the base year, to equate the average cost for that year to 100 (or some other convenient number) and to adjust other years on a proportionate basis.

The process of deciding the relative importance of the various items which compose an index is known as the 'weighting' of the index. In the case of a retail price index the weighting is normally based on the relative importance of the selected items in household expenditure. The list of items must be a selected list as it would be impossible to determine at regular intervals the cost of all items entering household expenditure. The list is accordingly limited to items which are relatively significant in total expenditure and for which price variations can be ascertained with reasonable accuracy.

Over time it becomes necessary to substitute new grades, qualities or types of articles for those formerly used as indicators of price movements in an effort to keep the index representative of current conditions. These substitutions can normally be achieved without injury to the index. From time to time major changes in the overall pattern of household expenditure are noted, and in the past these have prompted the abandonment of an existing index in favour of a different index, the composition and weighting of which was more representative of expenditure at that time.

Previous Retail Price Indexes

The earliest retail price index was the 'A' Series Index. First compiled in 1912, it covered food, groceries, and house rents. The 'A' Series Index was used for wage adjustment purposes by the Commonwealth Court of Conciliation and Arbitration from 1913 until 1933 when it was replaced by the 'C' Series Index.

The 'C' Series Index was first compiled in 1921 and involved a much wider coverage than the 'A' Series Index. Included were food and groceries, rent of four and five roomed houses, clothing, household drapery, household utensils, fuel lighting, fares, and smoking, as well as other miscellaneous items.

In 1925 a separate index was prepared from the food, groceries and rent components of the 'C' Series Index. Known as the 'B' Series Index, it replaced the 'A' Series Index for general statistical purposes.

A further index, the 'D' Series, was used by the Commonwealth Court of Conciliation and Arbitration during 1933-34. It was derived by combining the 'A' and 'C' Series Indexes.

Between 1934 and 1953 the Commonwealth basic wage was automatically adjusted each quarter for price variations. Early adjustments were made in accordance with movements in the 'C' Series Index, but from 1937 special 'Court' Indexes were issued by the Industrial Registrar, these in fact being arithmetical conversions of the 'C' Series Index.

By the end of the 1939-45 War the 'C' Series Index had been in use for twenty-five years and its weighting was considerably out of date, even though it had been slightly revised in 1936. Wartime controls, including rationing had

caused recurrent changes in consumption, and the pattern of household expenditure which emerged with the abolition of control in 1948 pointed to the need for complete revision of the weighting of the 'C' Series Index. However, not only had household expenditure changed over the war years, but it was proving increasingly volatile in the early post-war period. This suggested the need for an index with a greater adaptability to change than the 'C' Series Index with its relatively fixed weights. For example, as the post-war trends for home ownership and private motoring developed it became desirable to give increased weight to these items.

The immediate problem of the inappropriateness of the 'C' Series weighting was countered by the introduction of the Interim Index in 1954. A transitional measure based on the 'C' Series model, it embraced a wider range of commodities and services than did the 'C' Series Index. Compilation of the 'C' Series Index, however, continued until 1960 and details of its movement between 1901 and 1959 are given in the Statistical Summary on page 582.

The more fundamental problem of taking into account successive major changes in the pattern of expenditure and modes of living was left to the Consumer Price Index, which succeeded the Interim Index in 1960.

Consumer Price Index

The Consumer Price Index is a quarterly measure of variations in the retail prices of certain goods and services which make up a high proportion of the expenditure of wage earner households. Rather than a single index, it consists of a chain of linked indexes each representing a significant variation in composition and/or weighting. The weighting patterns adopted relate to an estimated aggregate expenditure for all wage earner households, and not to some estimated expenditure of a single household. In this way it is possible to give representation to certain major expenditures which relate to some households and not to others.

The Consumer Price Index was compiled for the first time in 1960, and retrospective calculations have been made dating back to 1948. This involved the linking of five indexes, with significant changes in composition or weighting introduced at the June Quarter 1952, June Quarter 1956, March Quarter 1960 and December Quarter 1963. The principal changes involved were:

- (a) the introduction of private motoring (1952), of television (1960), and of furniture (1963),
- (b) alterations in the proportions of houses under various modes of occupancy (1952, 1956, and 1963), and
- (c) changes in the weights of fuel and fares (1952, 1956, and 1963) and of private motoring (1956 and 1963).

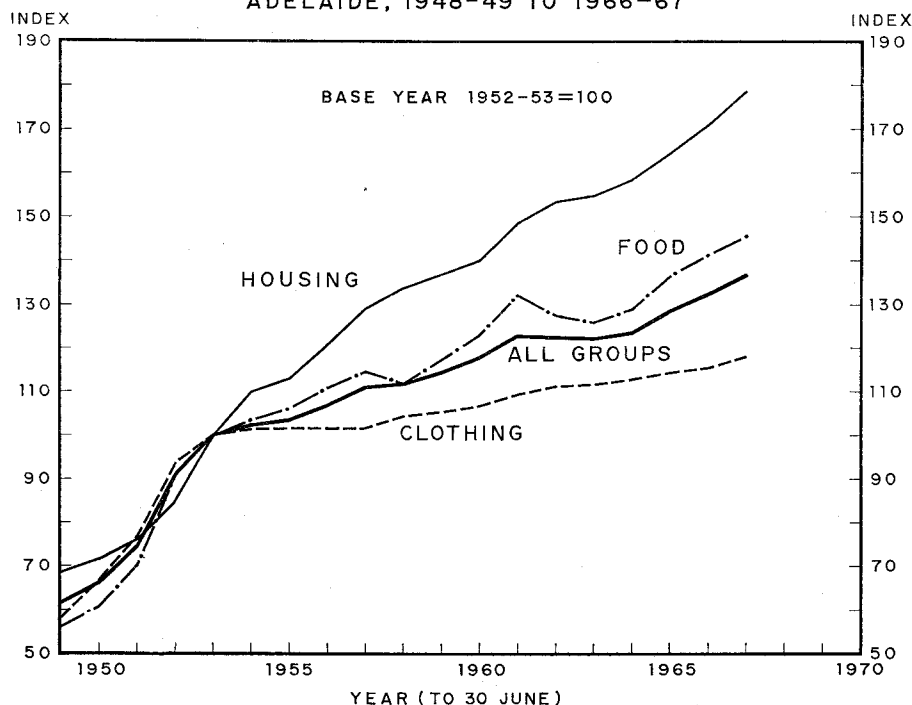
For most items, however, the weights used have not varied over the period of the index, and these are based on an estimated pattern of consumption for the years 1952-53 to 1956-57.

The wide range of commodities and services in the Consumer Price Index are arranged in five major groups, with index numbers compiled for each of these groups as well as a total for all items. Index numbers for Adelaide for these individual groups and for 'all groups' are recorded in the next table

Consumer Price Index^(a), Adelaide

Year	Food	Clothing and Drapery	Housing	Household Supplies	Miscellaneous	All Groups
1948-49	56.1	58.3	68.7	69.5	67.2	67.6
1949-50	60.7	66.8	71.6	72.0	69.5	66.2
1950-51	70.1	76.6	75.9	79.2	77.6	74.7
1951-52	90.9	93.6	85.0	92.8	92.0	91.4
1952-53	100.0	100.0	100.0	100.0	100.0	100.0
1953-54	103.5	101.4	109.9	100.6	99.1	102.3
1954-55	106.1	101.7	113.0	100.4	99.1	103.5
1955-56	110.9	101.6	120.8	100.1	104.1	106.9
1956-57	114.7	101.7	129.2	103.2	111.6	111.1
1957-58	111.8	104.4	133.9	104.0	114.2	111.9
1958-59	117.5	105.4	137.1	105.0	114.6	114.5
1959-60	123.1	106.8	140.0	106.0	118.8	118.0
1960-61	132.2	109.5	148.7	106.1	121.4	122.9
1961-62	127.6	111.2	153.5	106.7	121.9	122.5
1962-63	126.0	111.7	154.9	106.2	121.6	122.1
1963-64	129.1	112.8	158.5	104.4	122.3	123.5
1964-65	136.6	114.4	164.6	104.9	129.6	128.6
1965-66	141.2	115.5	171.1	106.2	136.4	132.7
1966-67	145.5	118.1	178.8	107.1	142.6	136.9

(a) Base year 1952-53 = 100.

CONSUMER PRICE INDEX
ADELAIDE, 1948-49 TO 1966-67

The 'all groups' index for Adelaide is shown in the following table with that for each of the other State capital cities. It is emphasised that these numbers show trends in the index within each individual city, but they do *not* measure differences in price levels between cities.

Consumer Price Index^(a), Adelaide and Other State Capital Cities

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Six Capital Cities
1960-61 ..	122.1	125.9	125.4	122.9	121.2	127.5	123.8
1961-62 ..	122.6	126.3	127.3	122.5	121.6	128.1	124.3
1962-63 ..	123.2	126.2	127.7	122.1	122.2	128.0	124.5
1963-64 ..	124.5	127.1	129.0	123.5	123.8	129.4	125.7
1964-65 ..	128.8	132.2	133.9	128.6	127.6	133.6	130.4
1965-66 ..	133.1	137.1	140.4	132.7	132.5	138.3	135.2
1966-67 ..	136.3	140.7	144.0	136.9	137.9	141.2	138.8

(a) Base year 1952-53 = 100.

RETAIL PRICES OF FOOD

The average retail prices in Adelaide of certain food items are given in the following table.

Average Retail Prices of Selected Food Items, Adelaide

Item	Unit	1963	1964	1965	1966	1967
Groceries:		Cents				
Bread (a)	2 lb	14.7	14.7	15.0	16.0	16.9
Self-raising flour	2 lb	15.8	15.0	14.6	15.3	15.5
Tea	$\frac{1}{2}$ lb	31.5	31.2	31.0	31.3	31.1
Sugar	1 lb	9.1	9.1	9.1	9.2	9.9
Rice	1 lb	11.0	12.7	12.7	12.8	12.9
Jam, plum	1 $\frac{1}{2}$ lb	26.9	27.0	27.4	29.1	30.2
Peaches, canned	29oz	26.3	25.7	26.5	27.6	27.7
Potatoes	7 lb	20.7	40.6	57.5	33.7	40.5
Onions, brown	1 lb	6.7	8.0	8.4	10.3	7.1
Dairy products:						
Butter, factory	1 lb	46.7	47.8	48.5	48.9	49.3
Cheese, processed	$\frac{1}{2}$ lb	(b)	22.8	22.6	23.4	24.6
Eggs, large	doz	54.6	55.6	59.6	65.5	62.8
Bacon, rashers	$\frac{1}{2}$ lb	32.9	36.8	39.7	41.5	46.8
Milk; fresh, bottled (a)	quart	16.7	16.9	17.5	18.0	18.1
Meat:						
Beef;						
Sirloin (without bone)	1 lb	42.5	47.0	52.5	56.7	59.1
Rump steak	1 lb	67.0	70.9	79.4	86.1	94.1
Sausages	1 lb	20.4	21.1	22.9	24.7	25.5
Corned silverside	1 lb	44.8	47.9	53.3	57.7	60.6
Lamb;						
Leg	1 lb	38.7	40.4	43.7	43.1	45.6
Forequarter	1 lb	23.0	24.9	27.4	26.5	28.3
Loin chops	1 lb	44.4	46.3	51.4	51.7	54.9
Mutton;						
Leg	1 lb	25.4	27.8	29.2	30.9	33.4
Forequarter	1 lb	13.7	15.8	17.2	18.7	19.7
Loin chops	1 lb	24.6	27.3	28.9	30.6	32.9
Pork;						
Leg	1 lb	52.8	59.2	56.7	57.3	63.9
Chops	1 lb	53.1	59.5	57.5	57.8	64.6

(a) Delivered. (b) Not collected.

Prices of agricultural products are shown in the table on page 358, and separate details for wheat, barley, wool, and livestock are given under the appropriate headings in Part 9.1.

PRICE CONTROL

Following the outbreak of the 1939-45 War the Commonwealth Government, acting under the authority of the National Security Act, established price control in Australia. A Commonwealth Prices Commissioner was appointed and given extensive powers in the control of prices. The National Security Act expired at the end of 1946 but temporary legislation provided for the continuation of price regulation until the end of 1948.

During 1948 the Commonwealth Government held a referendum seeking authority for permanent control over prices and rents. However, the proposal was rejected and the States agreed to assume responsibility for price control. In South Australia the necessary machinery was created by the Prices Act of 1948. Provision was made for the retention of existing Commonwealth price regulation orders until altered in accordance with the Act.

The State Prices Department determines prices for a wide range of controlled goods and services and investigates complaints concerning excessive prices for goods and charges for services whether subject to price control or not. Special investigations are carried out on behalf of the Government and also in respect of complaints arising from hire-purchase transactions.

An amendment to the Prices Act in 1967 provided for the continuation of price control until 31 December 1968.

RENT CONTROL

Extensive rent control was introduced in South Australia at the beginning of the 1939-45 War, with the passing by the State Government of the Increase in Rent (War Restrictions) Act which pegged rents at the level prevailing at 1 September 1939. In 1942 this Act was replaced by the Landlord and Tenant (Control of Rents) Act. Although providing the same benchmark, this Act allowed the South Australian Housing Trust to determine a variation in rent, either upon application by the landlord or tenant, or in certain cases on its own initiative. An appeal against a Housing Trust determination could be made to a Local Court. From the beginning of 1943 to the end of 1962, 60,180 applications for rent determinations were dealt with by the Housing Trust, of which twenty-nine were varied by a Local Court.

Following an inquiry held in 1951 on the future of rent control, proportionate loadings were introduced to allow for increases in property costs since 1939. The gradual relaxation of rent control was achieved through periodic extensions of these loadings and through the exclusion of long-term leases from the provisions of the Act.

At the end of 1962 the Landlord and Tenant (Control of Rents) Act was replaced by the Excessive Rents Act, which currently provides that the tenant of any premises, except where a lease for a term in excess of three years exists, may apply to a Local Court to determine whether the rent is excessive.

Sub-Standard Housing

To regulate the rents for sub-standard housing the Housing Improvement Act, 1940-1966 vests in the Housing Trust power to declare a house sub-standard, and fix a maximum rent on it for such time as the declaration remains in force.

Before formally declaring a property to be sub-standard, the Trust first notifies the owner of its intention. Upon notification of the Trust's intention the owner is given a period of at least two months during which time improvements may be made to the property. If, at the expiration of the time period, it is subsequently found that the property has not been satisfactorily improved, then it is customary for the Housing Trust to control the rent appropriate to the standard of accommodation provided.

PART 11

TRANSPORT AND COMMUNICATION

11.1 TRANSPORT

A network of sea, rail, road, and air services has been established between South Australia and the other States of Australia. Transport between the eastern States and Western Australia, and to a lesser extent Northern Territory, is made *via* South Australian services.

Distances between Adelaide and other Australian capital cities, and Darwin, are shown in the following table.

Distances Between Adelaide and Other Capital Cities

Method of Travel	Canberra	Sydney	Melbourne	Brisbane	Perth	Hobart	Darwin
				Miles			
Road (a) ..	751	889	462	1,518	1,699	—	2,004
Rail	1,006	1,079	483	1,692	1,622	—	—
Sea (b)....	—	973	514	1,471	(c)1,343	756	(d)3,133
Air	614	743	407	1,222	1,377	799	1,719

(a) In some cases shorter but less popular routes are available.

(b) Distance in nautical miles. (c) Fremantle. (d) *Via* Fremantle.

The location of the population within the State, as described in Part 5.2, created the demand for transport services to the major centres, and rural settlement throughout most of the State was assisted by the early development of rail services and the construction of arterial roads. The extension or improvement of transport services in and near the metropolitan area has followed the rapid housing development in the post-war period.

RAILWAYS

In Part 8.4, railways in South Australia were discussed under the headings of ownership and control, and standardisation of railway gauges. It was mentioned that both the State and Commonwealth Governments operate railways in this State and that there are two privately-owned railways, from Iron Knob and Iron Baron to Whyalla, and from Coffin Bay to Port Lincoln. This section deals with the operation of the South Australian Railways as one means of transport within and to and from the State. In the Year Book of the Commonwealth of Australia, the operations of the Commonwealth Railways in South Australia are included in figures for all Commonwealth Railways in Australia. No details are available on the operations of the private railways.

SOUTH AUSTRALIAN RAILWAYS

Funds employed in the South Australian Railways at 30 June 1967 totalled \$157,972,000, including \$4,193,000 representing capital losses incurred prior to 1927 on which the Railways are not responsible for debt charges. Operations for 1966-67 resulted in a deficit of \$9,579,000 and after taking into account contributions from Consolidated Revenue totalling \$8,000,000 towards increases in working costs and interest not covered by rises in freight rates and fares, there was a deficit of \$1,579,000. The following summary shows details of Funds Employed, Working Expenses, and Revenue for the past five years.

South Australian Railways: Funds Employed, Working Expenses and Revenue

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Funds employed	125,364	130,404	138,962	147,786	157,972
Working expenses	31,122	31,065	31,897	32,581	34,160
Revenue	27,826	29,673	29,960	29,137	30,417
Deficit on operating ...	3,296	1,392	1,937	3,443	3,744
Debt charges	4,926	4,958	5,191	5,567	5,835
Total deficit for year ...	8,222	6,350	7,128	9,011	9,579
Less contributions from Consolidated Revenue	7,800	8,000	8,000	8,000	8,000
Net surplus	-422	1,650	873	-1,011	-1,579

Sources of Revenue

The main sources of revenue of the South Australian Railways are from the carriage of freight (general merchandise, minerals, primary products and live-stock) and passengers carried on suburban and country lines. Intrastate freight rates on grain, increased as from September 1966 and for livestock and all other commodities, except firewood, from October 1966, was the first general increase in rates since 1960. Passenger fares also increased in October 1966 and in March 1967 all intersystem fares rose, the first increase since 1962.

The railways by-law rate structure was determined by the need to develop the country and this led to the philosophy of charging what the traffic would bear—charges were higher for expensive commodities than for cheap ones. This type of rate helped to subsidise those people who lived in sparsely populated areas which were serviced by developmental railways. In the past, losses from these services were recouped by charging higher rates on those lines which carried the greater volume of freight. With the increased competition from road transport

in recent years, on some lines it has been necessary to introduce special freight rates to meet that competition. Sources of revenue and the amounts received for the years 1962-63 to 1966-67 are shown in the table below.

South Australian Railways: Sources of Revenue

Source	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Country passengers	1,707	1,677	1,685	1,679	1,800
Suburban passengers	1,584	1,639	1,716	1,786	1,915
Parcels, mails, etc.	930	984	988	940	1,025
General merchandise and miscellaneous freight	10,867	11,891	12,444	11,960	11,861
Wool	477	489	369	245	194
Wheat	2,000	3,263	2,654	2,289	2,987
Livestock	1,360	1,039	954	851	673
Minerals	6,899	6,616	6,819	7,007	7,503
Rents and miscellaneous	1,165	1,238	1,467	1,418	1,415
Refreshment services and book-stalls	837	838	863	961	1,044
Total	27,826	29,673	29,960	29,137	30,417

In 1966-67 earnings increased in both coaching, and freight and livestock traffic. However, adverse seasonal conditions in the eastern States and the late break in the season in South Australia caused the level of general merchandise traffic to be substantially below expectations. Removal during 1965-66 of most controls over the transport of goods and livestock has also decreased railway revenue from the more highly rated traffics. Revenue from road motor services amounted to \$196,882 in 1966-67 and is included in revenue from passengers, parcels, mails, etc. and miscellaneous freight.

Further details of passenger traffic and freight traffic which resulted in the revenue shown in the previous table, are set out below.

South Australian Railways: Passenger Journeys and Passenger Train Mileages 1962-63 to 1966-67

Year	No. of Passengers Carried		Passenger Train Mileage		Average Miles Each Passenger Carried		Average Earnings per Passenger Mile	
	Country	Suburban	Country	Suburban	Country	Suburban	Country	Suburban
	'000	'000	'000	'000	No.	No.	Cents	Cents
1962-63	944	13,978	2,014	1,941	105.69	8.24	1.71	1.41
1963-64	895	14,332	1,954	1,967	108.20	8.38	1.73	1.36
1964-65	870	14,326	1,944	1,951	111.32	8.32	1.74	1.44
1965-66	840	14,671	1,923	1,950	113.53	8.36	1.76	1.46
1966-67	824	14,608	1,922	2,028	116.86	8.32	1.87	1.58

Note: 'Country' passengers carried includes all interstate passengers.

The number of passengers carried in 1942-43 was nearly 31 million persons, a substantial increase on the 17.6 million in 1939-40. Following a decline in the immediate post-war period, the number in 1949-50 settled at about the pre-war level, but since 1959-60, reflecting mainly the trend in suburban passenger traffic, has declined to between fifteen and sixteen million. Country passenger traffic has declined steadily since 1944-45.

Interstate passenger and freight services are operated in conjunction with interstate railways including the Commonwealth Railways—the Victorian Railways to Melbourne, Commonwealth and Western Australian Railways to Perth, and the Commonwealth Railways to Alice Springs. Passenger services offer

sleeping accommodation and first and second class travel. The number of passengers carried on South Australian Railways on these services is included under 'country' in the preceding table.

South Australian Railways: Freight Carried

Freight	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67
	'000 Tons						
Wool	45	45	44	45	36	29	23
Wheat	631	762	583	966	781	668	735
Barley	476	540	216	290	312	228	191
Livestock	214	179	181	152	142	118	87
Minerals	1,290	1,195	1,389	1,431	1,403	1,330	1,487
General merchandise	1,879	1,916	2,117	2,330	2,458	2,449	2,385
Number of tons carried	4,537	4,638	4,530	5,213	5,131	4,823	4,909
	'000						
Goods and livestock train mileage	2,784	2,733	2,771	2,745	2,687	2,619	2,634
	Cents						
Average earnings per ton-mile .	3.40	3.36	3.18	3.09	3.04	2.98	3.14

Working Expenses

The cost of operating the South Australian Railways during 1966-67 was \$34,160,000 plus debt charges which amounted to \$5,835,000. The working expenses include the cost of administration, maintenance of permanent way, rollingstock maintenance and operation costs, salaries and wages of station staff, guards, and conductors, and other costs. A comparison of working expenses for the last five years is given in the following table.

South Australian Railways: Working Expenses

Expenses	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Administration:					
Salaries, wages, expenses, etc. . .	846	870	924	996	1,090
Pay roll tax	438	445	467	483	513
Superannuation Act—Pensions.	1,061	1,084	1,114	1,122	1,207
Way and works:					
Maintenance and superintendence of permanent way, etc.	6,324	6,325	6,621	6,881	7,358
Rollingstock:					
General superintendence	203	210	224	224	253
Maintenance of rollingstock ..	6,186	5,880	5,771	5,865	5,903
Motive power, lubrication, etc..	5,242	5,002	4,916	4,877	4,923
Transportation and traffic:					
General superintendence, station staff, guards, etc.	7,775	8,136	8,685	8,880	9,441
Miscellaneous:					
Refreshment services, road motors, etc.	1,033	1,060	1,117	1,205	1,260
Stores:					
Salaries, wages, expenses	535	573	607	580	627
Depreciation (a)	1,480	1,481	1,451	1,468	1,585
Total	31,122	31,065	31,897	32,581	34,160

(a) Additional depreciation is included in 'Maintenance of rollingstock' and other accounts to cover depreciation of workshop machinery. The amount for 1966-67 was \$112,000.

The monthly average number of staff employed in operations and maintenance during 1966-67 was 8,174 persons (excluding those employed for special work).

Debt Charges

These charges to the South Australian Railways have increased over the five-year period 1962-63 to 1966-67 because of additional loan funds made available for capital purposes and further advances provided under Railways Standardization and Railway Equipment Agreements. Net funds provided from loan moneys were \$127,519,000 at 30 June 1967 as against \$114,221,000 at 30 June 1963.

The amount for which the State was liable for interest and repayment under the Railways Standardization Agreement at 30 June 1967 was \$8,919,000, an increase from \$3,041,000 at 30 June 1963. The total expenditure on standardisation to 30 June 1967 was \$31,630,000, of which \$29,729,000 was provided by the Commonwealth (30 per cent repayable by the State), and \$1,901,000 was contributed from the Consolidated Revenue of the State. Outstanding liability of the State to the Commonwealth under the Railway Equipment Agreement at 30 June 1967 amounted to \$790,000.

Debt charges for 1966-67 were:

	\$
Interest on Loan Funds provided for capital purposes (other than stores) including exchange on overseas debt	5,317,108
Interest on Loan Funds invested in Stores	165,297
Interest under Railways Standardization and Railway Equipment Agreements	352,667
	<hr/> 5,835,072 <hr/>

Train Mileage and Track Open

The average length of track open for traffic during the year 1966-67 was 2,480 miles. During 1965-66 the Kapinnie-Mount Hope (nine miles) and the Wandana-Kowulka (forty-seven miles) lines were closed and the Ceduna-Kevin (thirty-seven miles) line was opened, while in 1966-67 a two mile spur-line to Tonsley Park was opened. Train miles run during 1966-67 totalled 6,583,794. Capital cost on lines open and completed at 30 June 1967 was \$160,394,853.

The following table shows revenue and working expenses per train mile.

South Australian Railways: Revenue and Working Expenses

Year	Revenue	Working Expenses	Percentage of Working Expenses to Revenue	Train Mileage	Revenue per Train Mile	Working Expenses per Train Mile
	\$'000	\$'000	%	'000 Miles	\$	\$
1962-63	27,826	31,122	112	6,727	4.13	4.62
1963-64	29,672	31,064	105	6,666	4.45	4.66
1964-65	29,960	31,897	106	6,582	4.55	4.85
1965-66	29,137	32,581	112	6,492	4.49	5.02
1966-67	30,417	34,160	112	6,584	4.62	5.19

Train mileage was 6,793,000 in 1942-43 but fell to about 6 million in 1946-47 and 1948-49. By 1952-53 train mileage had risen to 7.2 million but in recent years it has declined slowly to its present level. In general both revenue and working expenses per train mile have increased in recent years with working expenses per train mile showing the more rapid increase.

Locomotives and Rollingstock

The development of traction in the South Australian Railways followed the pattern of development in other railway systems until early in the 1920s when more powerful steam locomotives, and goods wagons of greater capacity were introduced. The first main line diesel electric locomotive commenced operating in September 1951, and these, connected as twin units, haul loads of 1,000 tons over the Adelaide hills.

Concurrently with the introduction of diesel electric locomotives there has been considerable development in the field of railcars equipped with diesel engines arranged for multiple unit operation. When a comparison was made of the relative economies to be expected from the conversion of the suburban system to electric or diesel traction, it was determined that the multiple unit diesel trains offered greater economic advantages. The first multiple unit diesel train was brought into service in October 1955. Multiple unit diesel railcars have also been introduced into the country passenger services.

The extent of the change from steam to diesel electric locomotives and from petrol to diesel railcars since 1950 is revealed in the following table.

South Australian Railways: Locomotives and Rollingstock

At 30 June in selected years

Particulars	1950	1955	1960	1965	1967
Number					
Locomotives:					
Steam	333	365	225	151	116
Diesel electric;					
Main line	2	12	30	41	49
Shunting and transfer...			12	21	33
General purpose			—	35	38
Total	335	377	267	248	236
Rail cars: Power;					
Diesel	—	—	118	134	134
Petrol (a)	51	53	4	—	—
Rail cars: Non-power;					
Control equipped	—	—	7	7	7
Trailer	29	28	52	58	57
Coaches	515	485	353	243	210
Interstate coaches	47	54	61	71	73
Goods and livestock wagons	8,126	8,895	8,000	7,962	7,679
Service wagons and vans	465	478	467	526	471

(a) Petrol engines replaced by diesel engines.

The tonnage of various fuels consumed in locomotives and railcars during the years ended June 1950, 1955, 1960, 1965 and 1967 was as follows:

South Australian Railways: Locomotive Fuel Consumption*At 30 June in selected years*

Fuel	1950	1955	1960	1965	1967
	Tons				
Steam locomotives:					
Coal	263,000	199,868	78,861	20,411	5,961
Heavy oil	47,600	85,310	29,044	4,287	2,109
Diesel locomotives:					
Diesel oil	—	4,949	12,079	20,640	21,401
Rail cars:					
Petrol	<i>n.a.</i>	630	253	—	—
Diesel oil	—	814	8,175	8,528	8,516

n.a.—Not available.**Accident Casualties**

Accident casualties to persons other than railway employees were recorded by the South Australian Railways for the years 1965-66 and 1966-67 as follows:

	1965-66	1966-67
Persons killed	9	26
Persons injured	45	52

The number of fatalities in 1966-67 was unusually high—twenty-two occurred at crossings.

TRANSPORT CO-ORDINATION**TRANSPORT CONTROL BOARD**

The Transport Control Board was constituted under the Road and Railway Transport Act, 1930 which provided for the co-ordination of passenger and freight transport by railways and by vehicles used for carrying passengers and goods on roads, and for the control and licensing of persons operating such vehicles.

Under the provisions of the Road Maintenance (Contribution) Act, 1963 the Board ceased granting or renewing licences for the carriage of goods for hire as from 1 July 1964. Licences current at that date expired on 31 March 1968.

The Road and Railway Transport Act, 1930-1964 provides that 'any person may operate a vehicle for the carriage of goods for hire on any road in any part of the State'.

Powers and Obligations

The Board exercises control by declaring certain roads, outside a radius of ten miles from the G.P.O. controlled routes. Thereafter, a permit must be obtained before a vehicle can carry passengers for hire on any such route.

Under the Act, the Board may direct the Railways Commissioner, and licence carriers for the purpose of distributing and co-ordinating the transport of passengers and goods as between railway and road vehicles. The Board may order the closing of a railway line but this is subject to review.

The Board is obliged to grant sufficient licences to ensure an adequate passenger motor service on every controlled route which is within fifty miles of the G.P.O. and is at any point more than three miles from a railway line. Before the Board makes any order for the closing of a railway it must be satisfied that there will be other transport available.

Operations of the Board

Licences issued by the Board must specify the route or routes over which the licensee is permitted to operate vehicles and the amount payable for the licence. The Board may also specify the maximum number of vehicles that he is allowed to operate and maximum rates to be charged for the carriage of passengers or goods. These licences had a five year currency period and both passenger and freight licences expired on a common date, 31 March 1968. The Board may also issue special permits either of twelve months currency or for shorter periods.

At 30 June 1967 current licences totalled 133, comprising 46 passenger licences and 87 goods and livestock licences. Special annual permits included 111 charter coach, 244 hire car and 153 miscellaneous passenger permits whilst special permits for short periods issued during the year covered 3,353 passenger vehicles. Under Section 28(a) of the Act, the Board registers persons and firms who book passengers or receive freight on behalf of a licensee. At 30 June 1967 there were fifty-eight registered agents.

Interstate Transport

During the period prior to November 1954 the Board issued permits for interstate journeys, but after the Privy Council decision in that month interstate carriers enjoyed complete freedom of movement between the States. Early in 1957 an amendment to the Road and Railway Transport Act became operative and required owners of commercial vehicles (with a tare weight of 2½ tons or over) not registered in South Australia to contribute towards the maintenance of roads. The legislation was challenged in the High Court and in September 1957 was declared invalid.

The Road Maintenance (Contribution) Act, 1963 imposes a charge per ton mile on commercial goods vehicles of more than 8 tons load capacity using roads in South Australia.

ROYAL COMMISSION

In May 1966 a Royal Commission on State transport services was appointed 'to enquire into and report upon and make recommendations as to:

- (1) All aspects of the transportation in South Australia of passengers and goods by railway, by road, by sea and by air. In particular;
 - (a) whether it is desirable in the public interest to control by law the transportation of passengers and goods by road, by railway, by sea and by air and if so in what respects and to what extent;
 - (b) whether in the absence of control of transportation of goods, regular, adequate and economical transport services will be available to country towns and districts.
- (2) The differences existing in the cost of commodities as between the metropolitan area and country towns and districts, and in particular as to what proportion of such differences in country towns and districts is represented by the cost of freight, and to make recommendations as to what action, if any, should be taken to subject such differences to control, either under the provisions of the Prices Act, 1948-65, or by some other form of legislation.'

On 9 January 1968 the Commission signed its report and submitted it to the Government. Included in the recommendations was the proposal that the present Transport Control Board be abolished and replaced by a Department of Transport under a Commissioner who would be responsible to the Minister of Transport. The functions of the Department should include the issue of licences

and permits and general control of transport, the registration of motor vehicles and all functions of the Motor Vehicles Department, and the administration of the Road Maintenance (Contribution) Act. It should also have power to control the transport, in South Australia, of passengers and goods by rail, road, sea and air. The Commission also suggested that a Transport Planning Board be set up to make recommendations on the planning and development of transport in South Australia, ways to improve transport and services, the closing of railway lines or establishment of new lines and curtailment of services, and co-ordinating capital works programmes for public transport. It further recommended that a greater share of road maintenance tax be allocated to country districts, particularly where sealed surfaces are not expensive, and also that the Road Maintenance (Contribution) Act be amended so that road tax be paid by vehicles exceeding four tons load capacity.

Other proposals included in the Commissioner's recommendations were that the Commissioner of Transport should control all transport rates and passenger fares; some night suburban rail passenger services be replaced by buses, and road transport replace some country rail passenger services; certain railway losses be charged to general revenue; grants to the railway from general revenue should be varied, and a grant should be made from this source to meet suburban passenger losses together with other grants as determined by the Treasurer.

Regarding the second aspect of the enquiry, insufficient evidence was placed before the Commission of any substantial difference in the cost of commodities between the metropolitan area and country towns and consequently no recommendations were made. At March 1968 the report was under consideration by the Government.

TRAMWAY AND OMNIBUS SERVICES

MUNICIPAL TRAMWAYS TRUST

The Municipal Tramways Trust was incorporated by Act of Parliament in 1906. The Trust's activities are now regulated by the Municipal Tramways Trust Act, 1935-1965.

Exclusive powers are given to the Trust to:

- (1) operate tram systems propelled by electric energy within a radius of ten miles from the G.P.O.
- (2) carry passengers by motor omnibus for hire or reward on any route wholly or partially within the prescribed area as defined by the Act.
- (3) grant to any person a licence to carry passengers by motor omnibus for hire or reward on any route in (2) above.

In 1965 the prescribed area was extended to include the local government areas of Elizabeth and Salisbury and parts of Munno Para and Tea Tree Gully. Private bus operators within the prescribed area must be licensed by the Trust and the licence may stipulate such terms as duration of licence, routes, time tables and fares. Control is vested in a Board of five members all of whom are appointed by the Governor. Under the Act the State Treasurer is empowered to make grants to the Trust to enable it to meet the expenses incurred in the exercise of its functions.

Historical Survey

The first tramway in South Australia, from Adelaide to Kensington, was opened on 10 June 1878. This first tram service was horse drawn.

Horse drawn tramways were developed by the Adelaide & Suburban Tramway Company Ltd and six other companies with services eventually extending over routes totalling fifty-one miles. With the incorporation of the Municipal Tramways Trust in 1906 to provide electric traction for tramways, the operations of the former companies were taken over. The Kensington line was the first to be converted and was opened on 10 March 1909. Supplementary to the main electric tramways system motor bus services were introduced on 25 March 1925 and electric trolley buses on 5 September 1937.

During the 1939-45 War and the early post-war period renewal of rollingstock and tracks fell below requirements. In the years following, rising costs and loss of patronage associated with greater use of private cars contributed to the Trust suffering increasing financial losses. Amending legislation passed in 1952 gave the State Government a measure of financial control over the Trust's operations.

In 1953 the Board conducted a comprehensive review of the Trust's finances and affairs. Its conclusions were that if operating losses were to be reduced, considerable expenditure would be necessary to modernise capital equipment as a large part of the assets of the Trust had already reached the end of its economic life. A ten-year plan was drawn up to provide for the efficient rehabilitation and progressive development of the Trust. This plan incorporated the following main features:

- (1) Replacement of tram cars with diesel buses.
- (2) Erection of new parking and servicing depots.
- (3) Modernisation of the workshops.
- (4) Erection of new workshops.
- (5) Abandonment of electricity generation in favour of taking power from the Electricity Trust of South Australia.
- (6) Examination of all services and planning for the future needs of the metropolitan area.
- (7) Adoption of more efficient operating methods.

Because of the amount of expenditure contemplated and the nature of the transport problems involved, the Trust sought the assistance and views of a firm of consulting engineers in the United States of America. The report of these consultants largely confirmed the Trust's proposals. The plan, with slight modification, was subsequently completed more rapidly, and at less cost, than envisaged at first. New workshops were not built and the Glenelg tram service, which runs mainly on enclosed land rather than on public roadways, was retained.

All other tramcar routes were converted to diesel bus operation between 1953 and 1958. The future method of operation for the Glenelg services will depend upon circumstances existing at the end of the economic life of the present system. Electric trolley buses were replaced by diesel buses in July 1963. The task of taking up tram tracks and restoring roadways on abandoned tram tracks was completed during 1960-61. In broad terms the gross cost associated with this work was \$1,500,000 less the value of materials salvaged \$700,000, leaving a net cost of \$800,000.

Income and Expenditure

A table showing net funds employed, income and working expenses etc. for the last five years is given in Part 12.4 Public Finance—Semi-Government Authorities. Net funds employed at 30 June 1953 amounted to \$4,736,000, rose to \$8,534,000 by June 1958 and had fallen to \$5,268,000 by June 1967.

Income earned by the Trust exceeded working expenses each year until 1949-50, when income was \$2,934,000 and working expenses were \$3,184,000. The first grant of \$1,400,000 to the Trust was made by the State Treasurer in 1952-53; the amounts for the last ten years are shown in the following table.

Municipal Tramways Trust: Income and Expenditure

Year	Traffic Receipts	Sundry Receipts	Government Grants	Working Expenses	Interest on Loans	Net Deficiency
				\$'000		
1957-58	4,822	166	980	5,790	570	392
1958-59	4,854	202	880	5,666	616	346
1959-60	5,528	112	188	5,568	602	342
1960-61	5,404	112	60	5,354	576	354
1961-62	5,290	140	60	5,212	556	278
1962-63	5,296	140	26	5,166	534	238
1963-64	5,320	154	60	5,194	516	176
1964-65	5,743	156	20	5,487	518	86
1965-66	5,880	170	20	5,806	505	241
1966-67	6,071	199	20	5,947	474	131

At 30 June 1967 loan indebtedness amounted to \$9,268,000; these loans are secured by debentures issued to the Treasurer of South Australia.

Working Expenses

Working expenses of the Trust were \$1,244,000 in 1940-41 and had nearly doubled by 1946-47 when expenses were \$2,402,000. In 1966-67, working expenses reached a record level of \$5,947,000. Details for the last five years are given below.

Municipal Tramways Trust: Working Expenses

Working Expense	1962-63	1963-64	1964-65	1965-66	1966-67
			\$'000		
Traffic operations	2,778	2,834	3,016	3,241	3,347
Maintenance	819	774	811	884	929
Power for traffic	88	40	37	37	35
Fuel and oil for traffic	262	284	259	254	256
Highways contribution	90	92	92	91	90
Depreciation	536	574	581	559	524
Other expenses	594	596	691	740	766
Total	5,166	5,194	5,487	5,806	5,947
			Cents		
Working expenses per traffic mile	45.17	45.26	47.85	51.22	52.90

Savings in maintenance, and in power, fuel and oil have resulted from changes, already mentioned, which were introduced during the 1950s. Expenditure on rollingstock maintenance in 1955-56 was \$1,032,000 as against \$845,000 in 1966-67 and permanent way maintenance cost \$243,000 in 1955-56 as against \$19,000 in 1966-67. Combined figures for power, fuel and oil costs in 1955-56 were \$661,000 compared with \$291,000 in 1966-67. The average number of persons employed by the Trust during 1966-67 was 1,456 persons (186 salaried and 1,270 wages staff). Salaries and wages paid amounted to \$4,213,000.

Route Miles, Mileage Run and Passengers Carried

Route mileage of electric tramways in 1921 measured 66 miles, increasing to 80 miles by 1944, and declining to the present 7 miles by 1958. Total route mileage was increased with the introduction of motor buses in 1925 and trolley buses in September 1937. With the change to diesel operation, route mileage of motor buses showed a marked increase. Trolley bus routes are now served by diesel buses. Total route mileage, 108 miles in 1938, showed a slight increase of 10 miles by 1944, and remained unchanged until the 1950s.

Municipal Tramways Trust: Route Miles and Traffic Mileage

Year	Route Miles at End of Year				Mileage Run During Year			
	Electric Trams	Motor Omnibuses	Trolley Buses	Total	Electric Trams	Motor Omnibuses	Trolley Buses	Total
					'000	'000	'000	'000
1955-56 ..	60	54	23	137	4,543	3,517	2,682	10,742
1956-57 ..	44	71	23	138	3,700	4,602	2,632	10,934
1957-58 ..	37	82	23	142	2,472	6,779	2,213	11,464
1958-59 ..	7	102	23	132	844	9,947	1,293	12,084
1959-60 ..	7	107	23	137	617	9,782	1,555	11,954
1960-61 ..	7	108	23	138	543	10,315	707	11,565
1961-62 ..	7	112	23	142	510	9,486	1,352	11,348
1962-63 ..	7	115	23	145	497	10,234	704	11,435
1963-64 ..	7	141	—	148	498	10,956	23	11,477
1964-65 ..	7	141	—	148	495	10,972	—	11,467
1965-66 ..	7	142	—	149	486	10,849	—	11,335
1966-67 ..	7	142	—	149	471	10,772	—	11,243

Traffic miles run totalled approximately 8 million miles in 1936-37 but had increased to 10 million miles by 1944-45. Mileage has varied between 10 and 12 million miles since that year.

In 1908-09 there were about 31 million passengers carried by the Trust. This number increased to 68.5 million by 1927-28, fell during the 1930s, but increased to 95 million by 1944-45. The number of passengers carried has declined steadily since 1947-48, e.g. 78 million in 1949-50, 69 million in 1954-55, 61 million in 1959-60 and 50 million in 1966-67.

Municipal Tramways Trust: Passengers and Fares

Year	Passengers Carried	Traffic Revenue	Traffic Mileage	Average Fare	Traffic Revenue per Traffic Mile
	'000	\$'000	'000	Cents	Cents
1962-63 ..	58,039	5,296	11,435	8.95	46.31
1963-64 ..	58,571	5,320	11,477	8.92	46.38
1964-65 ..	56,434	5,743	11,467	10.00	51.44
1965-66 ..	53,112	5,880	11,335	10.89	53.37
1966-67 ..	49,735	6,071	11,243	12.01	55.77

Rollingstock

The change from electric traction to diesel operation is reflected in the following
 The change from electric traction to diesel operation is reflected in the following

Municipal Tramways Trust: Rollingstock and Seating Capacity

At 30 June (a)

Particulars	1945	1950	1955	1960	1965	1967
Rollingstock:						
Electric trams ...	304	279	178	30	30	28
Motor omnibuses	65	81	140	364	353	350
Trolley buses ...	52	61	91	56	—	—
Total vehicles	421	421	409	450	383	378
Seating capacity:						
Electric trams ...	15,370	14,280	10,147	1,908	1,908	1,792
Motor omnibuses	2,341	3,998	5,268	14,428	14,112	14,001
Trolley buses ...	2,712	2,984	4,184	2,006	—	—
Total seating	20,423	21,262	19,599	18,342	16,020	15,793

(a) 31 January in 1945 and 1950.

Accident Casualties

The following accidents occurred during the last two years:

	1965-66		1966-67	
	Killed	Injured	Killed	Injured
Passengers	—	192	—	121
Employees	—	97	—	118
Others	1	19	1	21
Total persons	1	308	1	260

PRIVATE MOTOR OMNIBUS SERVICES**Metropolitan Services**

During the last twenty-six years, route mileage of private motor omnibuses licensed by the Municipal Tramways Trust has increased by more than five times from 46.40 miles in 1941 to 249.45 miles in 1967, while the number of passengers carried has increased by more than six times from 2.3 million to 14.9 million. A large part of the increase in the number of passengers carried occurred in the ten years from 1941 (2.3 million) to 1951 (10.7 million).

The Municipal Tramways Trust grants licences to private bus operators to carry passengers within the prescribed area. During 1965-66 this area was extended to include the Cities of Elizabeth and Salisbury and parts of the local government areas of Munno Para and Tea Tree Gully. Consequently, 1965-66 and subsequent figures shown in the following table are not comparable with those for earlier years.

Private Motor Omnibuses, Metropolitan Services

Year	Route Mileage	Mileage Run	Passengers Carried	Rolling Stock	Traffic Receipts (Gross)
	Miles	'000 Miles	'000	No.	\$'000
1962-63 ..	144.95	3,584	10,762	128	1,054
1963-64 ..	143.14	3,563	10,926	124	1,068
1964-65 ..	145.09	3,600	10,511	132	1,166
1965-66 (a)	244.55	5,147	13,693	217	1,645
1966-67 (a)	249.45	5,963	14,956	224	1,971

(a) See text on page 485.

Interstate and Country Services

Regular interstate bus services operate to the eastern States and special tours are available to all States at different times of the year.

Motor coach services are operated from Adelaide to about 290 destinations within the State *via* twenty different routes. There are co-ordinated passenger rail and bus services on four additional routes.

TAXI-CABS

The Metropolitan Taxi-Cab Act, 1956 provided for the control of taxi-cabs in the prescribed area of Adelaide, and for incidental purposes, and set up the Metropolitan Taxi-Cab Board to administer the Act. The present Act is The Metropolitan Taxi-Cab Act, 1956-1963.

The granting of licences or permits to operate taxi-cabs within the metropolitan area was within the power of each of the metropolitan councils until the Board assumed control on 1 April 1958. It also took over the allotment of vehicles to stands and the charging of permit fees. The Board decided on one general taxi licence but portions of the Municipalities of Adelaide, Port Adelaide, and Glenelg, were to be restricted areas. Taxis operating in the Adelaide restricted area were issued with distinctive plates, and those in the Port Adelaide and Glenelg areas with numbers distinct from the unrestricted areas.

The metropolitan area, under the 1956 Act, included that part of the State which is within ten miles of the G.P.O. Adelaide, and that part of the municipality of Port Adelaide outside that area. The metropolitan area was extended to include the District Council of Stirling in March 1959, the District Council (now City) of Tea Tree Gully in October 1963, and the District Council of Salisbury and Elizabeth in June 1964. (The latter council is now the separate municipalities of the City of Elizabeth and the City of Salisbury.)

Regulations under the Act provide for the examination of taxi-cabs: the road-worthiness of all taxi-cabs is examined by the Police Department each year and the Board's inspectors check and test all meters.

Licences issued at 30 June 1968 included taxi-cabs, white plates (*i.e.* restricted) 250, green plates 548, hire cars 38 and funeral cars 8. Drivers licences current totalled 2,363 including 12 womens licences.

In April 1967 new regulations relating to open hailing of taxis in the metropolitan area were approved. These removed many of the restrictions which previously existed concerning area of operation and use of taxi stands. However, taxi-cabs at present licensed for the Salisbury and Elizabeth areas must remain 'pegged' to the stands within the municipal boundaries of those areas, but after dropping a fare outside of those areas the driver must head back in the direction of Salisbury and Elizabeth and if available for hire must accept a hail and proceed to any required destination within a twenty-five mile radius of the Adelaide G.P.O.

The Board considers that these amendments make for a better service to the public and are of assistance to the industry as a whole, and facilitate the Board's administration of the Act and Regulations.

MOTOR VEHICLES

Control of Road Traffic

Legislation covering the registration of motor vehicles, licensing of drivers, third party insurance, and general rules to be observed by road users (including pedestrians) in South Australia, was contained in the Road Traffic Act, 1934-1958. In December 1959 legislation on registration, licensing, and third party insurance, was passed under the Motor Vehicles Act, 1959 and similar provisions were repealed from the Road Traffic Act. The present legislation for the control of road traffic in South Australia is set out in the Road Traffic Act, 1961-1967 and the Motor Vehicles Act, 1959-1967.

The Road Traffic Act, 1961-1967 provides for the administration of the Act; contains provisions for the duties of drivers and pedestrians, equipment, size and weight of vehicles and safety; and supplementary provisions. The Act is administered by the Road Traffic Board of South Australia.

Registration of Motor Vehicles

Under the Act 'motor vehicle' means (a) a vehicle, tractor, or mobile machine driven or propelled or ordinarily capable of being driven or propelled by a steam engine, internal combustion engine, electricity or any other power not being human or animal, or (b) a trailer; but does not include a vehicle run upon a railway or tramway.

The Registrar of Motor Vehicles controls registration and 'a person shall not drive a motor vehicle on a road unless that vehicle has been registered under this Act and the registration thereof is for the time being in force'.

The Act provides for certain exemptions from registration *e.g.* vehicles with traders plates, vehicles carrying persons or firefighting equipment to prevent or control a fire, vehicles taking part in processions, etc. A tractor may be driven without registration on roads within twenty-five miles of a farm occupied by the owner of the tractor, when taking delivery after purchase, to and from a workshop for repairs, to draw farm implements, etc.

Permits to use vehicles, without registration, between farm blocks may be granted by the Registrar. A 14-day permit to drive a motor vehicle pending registration may be issued, under certain circumstances, by a member of the

police force stationed at a police station more than twenty-five miles from the G.P.O. Adelaide. The Act provides for other exemptions and permits.

Unless an application for registration is accompanied by a certificate of third party insurance, to cover the period of registration plus fourteen days, the Registrar will not register the vehicle. Registration is for a period of six or twelve months at the option of the applicant and according to the fee paid.

Registration fees vary according to the power-weight of a motor vehicle. This is calculated by adding the weight of the vehicle in hundredweights to its rated horsepower. The registration fee for a trailer is based on its unladen weight. Registration fees are higher for motor vehicles fitted with solid rubber or metal tyres.

Motor vehicles used for certain purposes are registered without fee, *e.g.* vehicles owned by the Fire Brigades Board and other fire fighting organisations, ambulances for the use of which no charge is made, council vehicles used solely or mainly for the collection and transport of household rubbish, etc. Registration at reduced rates is allowed for primary producers' commercial vehicles and tractors, prospectors' vehicles, and to vehicles used wholly or mainly in outer areas. Reduced rates are also available to incapacitated ex-servicemen. Vehicles used solely for interstate trade can be registered for \$2 for a period of twelve months.

The Act provides for registered vehicles to carry number plates and for a registration label to be affixed to each registered vehicle. It also provides for the issue of general traders plates and limited traders plates. In January 1967 the first number plates in the new alpha-numero series were issued.

Motor Vehicles on Register

The following table shows a revised series of motor vehicles on the register at 31 December 1963 to 1967.

Motor Vehicles on Register, South Australia
At 31 December

Type of Vehicle	1963	1964	1965	1966	1967
Cars	232,731	245,732	257,233	267,596	276,415
Station wagons	25,385	32,893	38,681	43,373	47,536
Motor cycles and scooters	15,370	14,019	12,708	12,007	12,509
Buses	1,663	1,765	1,854	1,949	2,030
Trucks	32,360	34,002	33,421	33,748	33,254
Utilities	38,740	38,633	38,468	38,352	38,013
Other (including panel vans)	10,923	11,605	12,206	12,684	13,013
Total on Register	357,172	378,649	394,571	409,709	422,770
Population per vehicle	2.86	2.78	2.74	2.70	2.65
Road tractors	4,696	4,845	4,842	4,885	6,579
Trailers (a)	64,758	69,008	73,011	77,599	82,499
Traders' plates	2,474	2,630	2,898	2,825	2,849

NOTE: Includes Commonwealth owned vehicles except defence services vehicles.

(a) Including caravans.

New Motor Vehicle Registrations

New motor vehicle registrations during the calendar years 1963 to 1967 are shown in the following table.

New Motor Vehicle Registrations, South Australia

Type of Vehicle	1963	1964	1965	1966	1967
Cars	23,603	26,328	27,567	23,762	25,339
Station wagons	6,982	7,960	6,601	4,982	4,811
Motor cycles and scooters	921	1,006	1,090	1,097	1,595
Buses	183	184	155	155	137
Trucks	2,228	2,651	2,411	1,946	1,882
Utilities	2,903	3,087	3,213	2,882	2,866
Other (including panel vans)	978	1,181	1,187	1,128	1,088
Total	37,798	42,397	42,224	35,952	37,718

NOTE: Excludes road tractors and trailers; includes Commonwealth owned vehicles except defence services vehicles.

In the following table new motor vehicle registrations are classified by horsepower (R.A.C.).

New Motor Vehicle Registrations, Classified by Horsepower (R.A.C.)
South Australia

Type of Vehicle and Horsepower	1963	1964	1965	1966	1967
Cars:					
Under 10	1,950	1,869	897	178	134
10-14	3,825	5,608	6,535	4,886	4,839
15-19	2,613	3,065	4,320	4,475	6,096
20-24	5,740	696	529	611	537
25-29	7,575	8,866	8,321	7,000	5,714
30 and over	1,898	6,223	6,965	6,612	8,018
Not stated	2	1	—	—	1
Total	23,603	26,328	27,567	23,762	25,339
Station Wagons:					
Under 20	789	686	484	214	254
20-29	5,640	4,215	3,258	2,560	2,157
30 and over	552	3,059	2,859	2,208	2,400
Not stated	1	—	—	—	—
Total	6,982	7,960	6,601	4,982	4,811
Utilities:					
Under 20	232	311	378	265	198
20-29	2,541	2,074	2,067	2,008	1,851
30 and over	130	702	768	609	816
Not stated	—	—	—	—	1
Total	2,903	3,087	3,213	2,882	2,866
Trucks:					
Under 20	91	105	138	167	203
20-29	767	784	641	491	429
30-39	915	1,277	1,115	966	845
40-49	342	357	391	243	213
50 and over	113	128	126	79	192
Total	2,228	2,651	2,411	1,946	1,882

NOTE: Includes Commonwealth owned vehicles except defence services vehicles.

Drivers Licences

Under the relevant section of the Motor Vehicles Act two classes of drivers licences are issued:

Class A: to drive motor vehicles of any kind.

Class B: to drive motor vehicles of any kind which do not exceed three tons.

The Act provides that an applicant must apply for a permit to learn to drive a motor vehicle and will be issued with a learner's permit once he has passed a written examination on the rules of the road. The permit is for a period not exceeding three months during which time he is expected to undergo a practical test conducted by a police officer appointed for the purpose. If he passes the test he will be issued with a certificate stating the type and make of vehicle used and that he was capable of driving this class of motor vehicle. He may then apply to the Registrar for the appropriate licence, *i.e.* a class A or B licence.

Provision is also made for the testing of drivers suspected of being incompetent or suffering from a disease or disability which may impair their ability to drive, and for the suspension of their licences should they fail to pass.

The fee for a class A or B licence is \$2 and for a learner's permit \$1. Licences and permits are not issued to persons under sixteen years of age.

In 1961, motor driving instructors licences were introduced and made compulsory where instruction was given for reward. The licence fee is \$20 for a period of three years.

Drivers licences current at 31 December 1967 totalled 481,496. The number in force first exceeded 100,000 in 1931, totalled 215,157 by 1951, 315,044 by 1957, and had risen to 447,985 at December 1965.

Revenue from Registrations and Licences

Revenue from registration fees and drivers licence fees totalled \$12,611,000 in 1967 compared with \$12,101,000 in 1966. These fees are paid into Consolidated Revenue Account but after deductions have been made for sinking fund and interest on loans raised for roads and bridges, and the administration expenses of the Highways and Local Government and Motor Vehicles Departments, the balance is paid into the Highways Fund.

Third Party Insurance

Part IV of the Motor Vehicles Act, 1959-1967 provides that 'a person shall not drive a motor vehicle on a road unless a policy of insurance complying with this Part is in force in relation to that vehicle'. This does not apply to farmers' tractors when exempted from registration or tractors used for roads and firebreaks.

The policy of insurance must be issued by an approved insurer and must 'insure the owner of the motor vehicle mentioned in the policy and any other person who at any other time drives that vehicle, whether with or without the consent of the owner, in respect of all liability for negligence which may be incurred by that owner or other person in respect of the death of, or bodily injury to, any person caused by or arising out of the use of the vehicle in any part of the Commonwealth'.

An 'approved insurer' means a person or body of persons approved by the Treasurer. It is not obligatory to insure any vehicle owned by the Crown and used solely in the public business of the State, or to insure vehicles owned by The Municipal Tramways Trust.

The Act sets out the liabilities of insurers and these include the liability to pay for emergency treatment and hospital treatment to a person injured (including fatally injured) by or arriving out of the use of an insured motor vehicle.

Where the driver of a motor vehicle has caused death or bodily injury in the use of that vehicle and the identity of the vehicle cannot be ascertained, then a person who could have obtained a judgment against the driver may give notice to the Treasurer and recover by action against a 'nominal defendant' named by the Treasurer. Payment by the 'nominal defendant' will be paid out of money contributed by an association of insurers to a scheme under section 119 or by the Treasurer, if no such scheme is in operation.

The Treasurer will appoint a 'nominal defendant' where a claim is made by a person in respect of death or a bodily injury caused by negligence in the use of an uninsured motor vehicle on a road. Payments made by the 'nominal defendant' are recoverable from the driver of the motor vehicle or any person liable for the negligence of that driver.

The Act provides that an injured person may claim against his or her spouse, where the spouse is an insured person and has caused that person bodily injury by negligence in the use of a motor vehicle.

The Act sets out the right of an insurer against the unauthorised user of a vehicle, the power of an insurer to deal with claims against the insured, and the duty of the insured not to litigate or negotiate a claim without the consent of the insurer.

Upon the recommendation of the Treasurer, the Governor may appoint a committee to inquire into and report what maximum rates of premiums are fair and reasonable for third party insurance.

Premiums from February 1967 for private and business cars in the metropolitan area are \$27.50 per annum and in the country \$25.00, for taxis \$140 and \$50, and for goods-carrying vehicles, \$29.50 and \$21.00 respectively. Other premiums include \$5.50 for primary producers' trucks.

During 1966-67, third party insurance premiums received amounted to \$8,885,000 and claims paid were \$7,350,000.

Census of Motor Vehicles

A census of motor vehicles on the register at 31 December 1962 was completed in Australia during 1963 from particulars of motor vehicle registrations. An earlier census was conducted at 31 December 1955.

The following table shows the number of vehicles of each type in South Australia at 31 December 1955 and 1962. In addition, in 1962 there were 4,463 tractors, heavy equipment, and industrial vehicles, and 57,525 trailers on the register; corresponding details are not available for 1955.

Further tables on the 1962 Census containing classifications of vehicles by year or model, horsepower, etc. are given in the bulletin *Census of Motor Vehicles*, 31 December 1962, Bulletin No. 4—South Australia published by the Commonwealth Statistician.

Types of Motor Vehicles, South Australia, 1955 and 1962

Type of Vehicle	1955		1962	
	Number	Proportion to Total Vehicles	Number	Proportion to Total Vehicles
		%		%
Motor cars:				
Sedans.....	127,582	52.20	211,387	62.53
Convertibles and open cars....	21,432	8.77	7,773	2.30
Taxis, hire cars.....	(a)	(a)	650	0.19
Ambulances, hearses.....	(a)	(a)	192	0.06
Other.....	148	0.06	8	0.00
Total motor cars.....	149,162	61.03	220,010	65.08
Station wagons.....	1,344	0.55	18,895	5.59
Utilities.....	33,837	13.84	38,539	11.40
Panel vans.....	5,256	2.15	9,678	2.86
Trucks:				
Table top, platform.....	24,561	10.05	23,571	6.97
Van-type.....	480	0.20	686	0.20
Tipper.....	3,150	1.29	4,917	1.46
Articulated, semi-trailer.....	1,340	0.55	2,205	0.65
Horse float, other trucks.....	134	0.05	305	0.09
Total trucks.....	29,665	12.14	31,684	9.37
Other truck-type:				
Tankers.....	462	0.19	351	0.10
Concrete agitators.....			82	0.02
Tow trucks.....			62	0.02
Fire-fighting units, etc.			487	0.15
Total other truck-type.....	462	0.19	982	0.29
Omnibuses.....	973	0.40	1,580	0.47
Motor cycles:				
Solo, motor scooters.....	23,704	9.70	15,205	4.49
Side car.....			1,008	0.30
Auto cycle.....			481	0.14
Other.....			23	0.01
Total motor cycles....	23,704	9.70	16,717	4.94
Total motor vehicles..	244,403	100.00	338,085	100.00

NOTE: Includes Commonwealth owned vehicles except defence services vehicles.

a) Included with sedans or other.

Vehicle Usage

In November 1963 a postal sample survey of motor vehicle usage was conducted throughout Australia. The timing of the collection and the specification of the form were such that details can be taken as representative of usage in the calendar year 1963. A summary of results obtained for South Australia is set out below.

It should be borne in mind that since results are obtained from a sample they are not precise and should be considered as approximations only. In addition, total fuel consumption calculated from the survey appears low in comparison with other available information. The deficiency appears to be of the order of

15 per cent to 20 per cent; a possible explanation is a tendency, particularly among car owners, to overstate average mileage per gallon.

Motor Vehicle Usage ^(a), South Australia, 1963

Type of Vehicle	Average Annual Mileage per Vehicle	Average Fuel Consumption (b)	Business Mileage as a Proportion of Total Mileage
	Miles	M.P.G.	%
Cars and station wagons	8,180	25.5	25.0
Utilities and panel vans	8,370	20.3	75.1
Trucks, with carrying capacity of:			
Less than two tons	5,400	13.2	97.3
Two tons but less than three tons	4,860	11.7	98.3
Three tons but less than five tons	5,860	10.3	99.1
Five tons and over; rigid	10,400	8.7	99.4
Five tons and over; articulated	29,550	6.7	100.0

(a) Excludes defence services vehicles.

(b) May be overstated—see text above.

For cars and station wagons in South Australia (excluding dealer-owned vehicles) the average annual mileage was 7,760 for those registered at a metropolitan address and 9,330 for those registered at a non-metropolitan address. Corresponding figures for the whole of Australia were 8,770 and 8,760 respectively.

Road Traffic Accidents

Details of road traffic accidents involving casualty or property damage exceeding \$50 and recorded by the Police Department, are shown in the following table for the years 1962-63 to 1966-67.

Road Traffic Accidents, South Australia

Year	Total Accidents Recorded	Accidents Involving Casualties	Persons Killed	Persons Injured	Rate per 10,000 Motor Vehicles on Register (a)			Rate per 100,000 of Mean Population		
					Total Accidents Recorded	Persons Killed	Persons Injured	Total Accidents Recorded	Persons Killed	Persons Injured
1962-63	21,597	6,343	201	8,216	646	6	238	2,163	20	823
1963-64	22,912	6,284	236	8,300	646	7	234	2,239	23	811
1964-65	27,038	7,563	232	9,777	719	6	260	2,570	22	929
1965-66	26,151	6,758	266	8,980	666	7	229	2,417	25	830
1966-67	26,544	7,708	273	10,471	652	7	257	2,404	25	949

(a) 'Motor vehicles on register' is the mean number for each year; includes Commonwealth owned vehicles except defence services vehicles; excludes road tractors and trailers.

The next table shows road traffic accident casualties for the last five years. During 1966-67, of the total number of persons killed, 38 per cent were drivers of motor vehicles, 34 per cent passengers and 23 per cent pedestrians, whilst of the total number of persons injured 40 per cent were drivers of motor vehicles, 38 per cent passengers and 9 per cent pedestrians.

Road Traffic Accidents: Casualties, South Australia

Year	Drivers of Motor Vehicles	Motor Cyclists	Pedal Cyclists	Pass- engers	Pedes- trians	Other and Not Stated	Total
PERSONS KILLED							
1962-63 ..	61	10	13	50	66	1	201
1963-64 ..	81	19	15	63	58	—	236
1964-65 ..	73	9	17	62	70	1	232
1965-66 ..	94	7	19	79	67	—	266
1966-67 ..	103	4	11	94	62	—	274
PERSONS INJURED							
1962-63 ..	2,796	897	840	2,836	845	2	8,216
1963-64 ..	3,204	686	655	3,106	642	7	8,300
1964-65 ..	3,683	813	729	3,559	987	6	9,777
1965-66 ..	3,617	639	640	3,158	926	—	8,980
1966-67 ..	4,162	674	774	3,927	930	4	10,471

SHIPPING**Control of Shipping**

The Commonwealth Parliament is empowered under the Commonwealth Constitution to make laws in respect of trade and commerce with other countries and among the States.

Navigation and shipping are regulated under the Commonwealth *Navigation Act* 1912-1967 and the provisions of the Act apply to ships registered in Australia (except those engaged solely in the domestic trade of any one State) and other British ships whose first port of clearance and whose port of destination are within the Commonwealth. Other shipping Acts under the trade and commerce power of the Commonwealth are the *Sea-Carriage of Goods Act* 1924-1961, the *Seamen's Compensation Act* 1911-1967, the *Seamen's War Pensions and Allowances Act* 1940-1967, the *Australian Coastal Shipping Commission Act* 1966, the *Australian Coastal Shipping Agreement Act* 1956, and the *Stevedoring Industry Act* 1956-1966.

Shipping in South Australia was controlled by the Marine Board and Navigation Act of 1881 and subsequent amendments, and the Harbors Act, 1913. The first provisions of the Commonwealth *Navigation Act* 1912 were brought into operation in 1921. At present, shipping in South Australia is controlled by the Commonwealth Act and, where this does not apply, by the Harbors Act, 1936-1967 and the Marine Act, 1936-1962. Both of these State Acts are administered by the Department of Marine and Harbors.

Registration of Shipping

Registration of shipping in Australia is in accordance with the Merchant Shipping Act 1894 of the Imperial Parliament, under sections which apply to the United Kingdom and all British dominions. Registration is not compulsory for vessels of under 15 tons burden which are engaged in river or coastal trade or for larger vessels if not engaged in trade. Yachts and small trading vessels may be registered at the request of the owners as registration facilitates the sale or mortgage of these vessels. An annual review of the register is carried out but some vessels, whose present ownership or use cannot be traced, are retained on the register in the absence of any positive justification for their removal.

The size of a vessel may be expressed in four different ways; by gross, net, displacement, or deadweight tonnage. Gross tonnage is the total enclosed cubic capacity of the ship on a basis of 100 cubic feet per ton; net tonnage is the cubic capacity available for cargo in terms of 100 cubic feet per ton; displacement tonnage is the weight of water displaced by a ship; deadweight tonnage is the total weight in tons of fuel, water, stores and cargo that a ship can carry. Passenger ships are commonly rated by their gross tonnage, cargo ships by their net tonnage, warships by their displacement tonnage, and oil tankers by their deadweight tonnage. The following table shows the number of vessels on the South Australian Register at 31 December 1967.

Vessels on South Australian Register

At 31 December 1967

Net Tonnage	Steam and Motor			Sailing (including Fitted with Auxiliary Power)			Barges, Hulks, Dredges, etc., not Self-Propelled		
	Vessels	Gross Tonnage	Net Tonnage	Vessels	Gross Tonnage	Net Tonnage	Vessels	Gross Tonnage	Net Tonnage
		'000	'000		'000	'000		'000	'000
Under 50	33	2,642	424	58	1,263	948	—	—	—
50-99	14	1,585	968	8	966	701	1	101	93
100-199	1	228	194	1	229	132	1	179	179
200-499	1	730	469	—	—	—	—	—	—
500-999	2	4,237	1,543	—	—	—	1	674	624
1,000-2,999	2	6,515	3,137	—	—	—	—	—	—
3,000 and over ...	3	21,961	13,253	—	—	—	—	—	—
Total ...	56	37,898	19,988	67	2,458	1,781	3	954	896

Arrivals at South Australian Ports

Shipping arrivals at all ports in South Australia, including vessels moving only between ports in this State, for the years 1957-58 to 1966-67 are shown in the following table whilst a further table shows arrivals at individual ports for the year 1966-67. In both tables each column headed intrastate, interstate, and overseas, contains details of vessels engaged on that division of trade at the time of the voyage.

Shipping Arrivals at South Australian Ports

Year	Intrastate		Interstate		Overseas		Total	
	Number	Net Tonnage	Number	Net Tonnage	Number	Net Tonnage	Number	Net Tonnage
		'000		'000		'000		'000
1957-58	4,205	1,020	1,145	3,216	1,033	4,817	6,383	9,053
1958-59	4,122	943	1,153	3,077	1,147	5,284	6,422	9,304
1959-60	3,788	989	1,123	3,055	1,143	5,233	6,054	9,277
1960-61	3,803	695	1,119	3,075	1,343	6,140	6,265	9,910
1961-62	3,228	775	1,098	3,039	1,464	6,609	5,790	10,423
1962-63	2,949	899	1,096	3,184	1,421	6,638	5,466	10,721
1963-64	2,920	1,227	1,206	3,574	1,629	8,326	5,755	13,127
1964-65	3,020	1,301	1,160	3,565	1,555	8,259	5,735	13,124
1965-66	2,717	1,065	1,172	3,700	1,387	7,563	5,276	12,328
1966-67	1,964	1,000	1,043	3,643	1,435	8,108	4,442	12,751

In 1957-58 intrastate shipping accounted for almost 66 per cent of all arrivals whereas in 1966-67 this figure had fallen to 44 per cent. This fall in intrastate shipping was partly offset by an increase in arrivals from overseas. Although there was a fall in the total number of arrivals over the period, total net tonnage increased—the average size of ships arriving increased from 1,400 net tons in 1957-58 to 2,900 net tons in 1966-67. The 4,442 arrivals in 1966-67 were the lowest since records on this basis were first kept in 1924-25 while the average net tonnage was the highest.

Shipping Arrivals at South Australian Ports, 1966-67

Name of Port	Intrastate		Interstate		Overseas		Total	
	Number	Net Tonnage	Number	Net Tonnage	Number	Net Tonnage	Number	Net Tonnage
		'000		'000		'000		'000
American River.....	167	16	—	—	—	—	167	16
Ardrossan.....	19	6	76	169	22	121	117	296
Ballast Head.....	2	(b)	22	34	1	1	25	36
Edithburgh.....	55	3	2	2	13	24	70	29
Farquhar Jetty (Klein Point).....	122	117	—	—	—	—	122	117
Kingscote.....	212	98	—	—	—	—	212	98
Port Adelaide (a) ..	672	242	335	849	919	4,382	1,926	5,473
Port Augusta.....	—	—	11	29	6	21	17	50
Port Lincoln.....	218	167	29	39	94	465	341	671
Port Pirie.....	222	87	76	235	137	614	435	937
Port Stanvac.....	27	160	38	227	64	1,764	129	2,151
Rapid Bay.....	20	62	51	186	—	—	71	248
Stenhouse Bay.....	4	5	50	63	22	37	76	104
Thevenard.....	1	(b)	23	30	60	179	84	209
Wallaroo.....	—	—	7	10	31	184	38	194
Whyalla.....	32	14	301	1,681	66	317	399	2,011
All other outports ..	191	21	22	90	—	—	213	111
Total arrivals ..	1,964	1,000	1,043	3,643	1,435	8,108	4,442	12,751

(a) Inner and Outer Harbor. (b) Less than 500 tons.

Arrivals from Overseas and Interstate

The table in this section and later shipping tables refer to vessels moving overseas direct or *via* other States, and to other vessels moving interstate. Vessels are entered at the first port of call in South Australia and cleared from the port of final departure from South Australia.

In the following table vessels entered are shown as arrivals; the number of vessels and net tonnage are given for the four years ended 1965-66.

Shipping Arrivals in South Australia from Overseas and Interstate

Arriving from:	Vessels				Net Tonnage			
	1962-63	1963-64	1964-65	1965-66	1962-63	1963-64	1964-65	1965-66
	Number				'000			
Overseas:								
Canada.....	60	56	45	57	260	249	200	268
Europe;								
Germany, Federal								
Republic.....	51	44	38	43	226	206	186	198
Italy.....	15	9	12	12	110	114	168	156
United Kingdom.....	96	113	104	97	700	763	669	646
Other.....	48	65	84	49	202	256	348	196
Hong Kong.....	18	19	20	21	74	63	68	67
India, Pakistan and Ceylon	42	26	24	24	170	110	92	107
Indonesia.....	6	18	20	6	27	99	120	27
Japan.....	103	162	105	105	442	738	466	501
Malaysia.....	22	28	60	41	78	89	221	149
Nauru and Ocean Island	16	16	18	10	85	82	94	57
New Zealand.....	74	77	57	70	205	228	145	196
United States of America ..	83	99	117	119	382	449	517	554
Other.....	179	207	184	192	914	1,643	1,809	2,013
Total Overseas.....	813	939	888	846	3,875	5,089	5,103	5,136
Interstate	1,132	1,228	1,222	1,163	4,011	4,397	4,595	4,381
Total.....	1,945	2,167	2,110	2,009	7,886	9,486	9,697	9,517

The number of vessels arriving from overseas in 1965-66 was less than in the previous year, but the net tonnage was slightly higher whereas both the number and net tonnage of vessels arriving from interstate were less than in 1964-65.

Arrivals, and Departures, with Cargo and in Ballast

Shipping arrivals and departures with cargo and in ballast are shown in the table below for the year 1965-66. Most of the vessels arriving in South Australia in ballast were from interstate direct and a large number of these were ore-carrying vessels arriving at Whyalla. Vessels arriving in ballast from overseas direct to outports in this State were mainly grain carriers.

Vessels Entered and Cleared: With Cargo and in Ballast, South Australia 1965-66

Country of Registration	Vessels Entered				Vessels Cleared			
	With Cargo		In Ballast		With Cargo		In Ballast	
	Number	Net Tonnage	Number	Net Tonnage	Number	Net Tonnage	Number	Net Tonnage
		'000		'000		'000		'000
Australia	424	1,170	446	1,664	844	2,658	39	229
Europe:								
Denmark	21	95	8	14	28	104	—	—
Germany, Federal Republic	57	270	6	17	63	291	—	—
Greece	13	74	14	84	21	129	3	15
Italy	17	218	15	131	20	249	11	93
Netherlands	89	371	6	32	97	411	1	3
Norway	70	408	9	61	63	367	14	85
Sweden	74	308	9	27	75	283	5	45
United Kingdom	380	2,571	45	233	383	2,587	39	198
Other	17	148	4	39	19	153	2	38
Hong Kong	19	67	4	16	23	82	1	3
Japan	74	398	6	17	69	367	12	51
New Zealand	31	55	28	53	64	124	—	—
United States of America	11	53	3	10	13	62	—	—
Other	71	765	38	149	81	804	24	97
Total	1,368	6,970	641	2,547	1,863	8,672	151	857

Nationality of Arrivals

The country of registration of vessels arriving in South Australia during the years 1962-63 to 1965-66 is shown in the table below.

Nationality of Vessels Entered South Australia

Country of Registration	Vessels			Net Tonnage			
	1962-63	1963-64	1964-65	1962-63	1963-64	1964-65	1965-66
	Number			'000			
Australia	809	916	871	870	2,307	2,667	2,841
Europe:							
Denmark	46	50	48	29	234	201	222
Germany, Federal Republic	50	57	76	63	189	259	475
Greece	11	32	28	27	49	184	145
Italy	24	24	31	32	182	239	332
Netherlands	88	94	94	95	343	384	399
Norway	107	116	93	79	489	563	515
Sweden	88	93	95	83	321	339	364
United Kingdom	479	520	468	425	2,821	3,407	3,121
Other	19	17	19	21	74	62	72
Hong Kong	5	22	28	23	47	83	100
Japan	65	66	73	80	289	299	315
New Zealand	62	55	55	59	120	104	96
United States of America	15	18	18	14	73	88	78
Other	77	87	113	109	347	608	622
Total	1,945	2,167	2,110	2,009	7,886	9,486	9,697

In 1965-66, 70 per cent of vessels entered were registered in British Commonwealth countries whereas in 1949-50 this percentage was as high as 86 per cent and in 1954-55, 83 per cent. Since 1949-50 a marked increase has occurred in vessels entered which were registered in Australia, and also the Netherlands,

Japan, and Sweden. The total number of arrivals registered in the United Kingdom has fallen slightly in this period, while the proportion has dropped from 47 per cent to 21 per cent.

Distances to Overseas Ports

Distances in nautical miles from Port Adelaide to principal overseas ports are shown in the following table. Particulars of distances by sea from Port Adelaide to the ports of other Australian capital cities are given on page 473.

Distances from Port Adelaide to Principal Overseas Ports

Port Adelaide to:	Nautical Miles	Port Adelaide to:	Nautical Miles
<i>Africa;</i>		<i>New Zealand;</i>	
Capetown	6,107	Auckland	2,035
Port Said	7,500	Wellington	1,880
<i>Asia and East Indies;</i>		<i>North America;</i>	
Colombo	4,364	Baltimore	10,253
Djakarta	3,047	Montreal	11,468
Hong Kong	4,789	New York	10,323
Singapore	3,504	Panama	8,307
Yokohama	5,352	San Francisco	7,357
<i>Europe (a);</i>		Vancouver	7,741
Liverpool	10,677	<i>South America;</i>	
London	10,712	Buenos Aires	7,775
Marseilles	9,011	Rio de Janeiro	8,579
Naples	8,607	Valparaiso	6,780

(a) *Via Suez Canal.* Distances *via Cape Town* are: London, 12,049 miles; Liverpool, 12,010 miles; Marseilles, 11,750 miles; and Naples, 12,039 miles.

CIVIL AVIATION

Control of Civil Aviation

In Australia, civil aviation is subject to the Commonwealth *Air Navigation Act* 1920-1966 and to regulations made under the Act. The South Australian *Air Navigation Act*, 1937 provided for 'the application of Commonwealth Air Navigation Regulations to, and in relation to, air navigation within the State of South Australia'. The regulations under the Commonwealth Act were drawn up to give effect to the 1944 Chicago convention on Civil Aviation. Regulations based on the resolutions of the Paris convention in 1919 were no longer adequate in the years after the 1939-45 War because of the immense wartime development of aerial transport. The present regulations, administered by the Commonwealth Department of Civil Aviation, cover the registration of aircraft and the issue of certificates of airworthiness; the licensing of aircraft services, aircraft operating crews, aerodromes, and flying training schools; and the rules of the air. The department is responsible for the operation of Air Traffic Control and has assumed responsibility for co-ordination of Search and Rescue operations.

Under the *Australian National Airlines Act* 1945 the Australian National Airlines Commission was established and empowered to operate Commonwealth-owned air services. The Commission trades under the name Trans-Australia Airlines.

The *Civil Aviation Agreement Act 1952* ratified an agreement between the Commonwealth and Australian National Airways Pty Ltd to ensure the efficient and economical operation of air services within Australia by eliminating wasteful competition between that company and Trans-Australia Airlines and to rationalise the services of both airlines. The *Civil Aviation Agreement Act 1957* was enacted to extend the privileges and obligations of the 1952 Act to the new proprietor of the major private airline after the purchase of Australian National Airways Pty Ltd by Ansett Transport Industries Ltd. The Commonwealth passed the *Airlines Equipment Act* in 1958 and this provided for further financial assistance to both airlines for the purchase of new aircraft and empowered the Commonwealth to limit the aircraft capacity being provided on competitive routes by these two operators.

The *Airlines Agreement* approved by the *Airlines Agreement Act 1961* consolidated all the arrangements and principles developed by the Government over the past decade for maintaining and securing the competitive airline system and made important arrangements affecting the introduction of new aircraft on Australian domestic routes. The *Civil Aviation Agreement Act 1952-1957*, amended by the 1961 Act, is now cited as the *Airlines Agreement Act 1952-1961*.

For reference to international agreements on civil aviation see Year Book of the Commonwealth of Australia No. 48, and for references to international organisations see Year Book No. 37.

Aircraft on Register

The total number of aircraft listed on the Australian register at 30 June 1967 was 2,970 aircraft, an increase from 2,605 registered at June 1966. Corresponding figures for the South Australian-Northern Territory Region are given in the following table which shows aircraft classified according to operations.

**Aircraft Registered, Type of Operation
South Australia-Northern Territory Region**

Type of Operation	At 30 June				
	1963	1964	1965	1966	1967
Private	82	104	108	116	124
Aerial work	41	43	51	67	72
Charter	47	39	48	72	86
Regular public transport	18	19	15	15	20
Total	188	205	222	270	302

Of interest is the increase in the use of aircraft for top dressing with superphosphate and crop dusting with insecticides, etc. in South Australia; in the year ended 31 December 1960 less than 164,000 acres were so treated, increasing to 470,000 acres and 1,276,000 acres in the years ended 31 March 1963 and 1967 respectively. More complete details are available in Part 9.1.

Aerial Medical Services

Aerial medical services are carried out in the outback areas of Australia. The Royal Flying Doctor Service of Australia (S.A. Section) Inc. operates control stations at Alice Springs and Port Augusta. Early in 1968 the Flying Doctor

Service took over the aerial services of the Bush Church Aid Society (S.A. Branch), which previously operated from Ceduna and are now maintained from Port Augusta.

Australian Flying Scholarship Scheme

The Commonwealth has subsidised flying training in Australia largely through the aero clubs since 1926. In 1961 the Commonwealth introduced a new system of subsidies to Australian flying training organisations including the aero clubs, flying schools and the Gliding Federation of Australia, spread over a four-year period. These subsidies are no longer in operation but the Australian Flying Scholarship scheme which was introduced (at the same time as the subsidy arrangements) for the training of career pilots for the Australian commercial aviation industry is still in operation.

Passengers and Freight Carried

The number of passengers carried on civil airlines in South Australia has more than doubled on both interstate and intrastate services during the last ten years while tonnage of freight remained relatively stable. Details are shown in the following table.

Passengers and Freight Carried on Civil Airlines, South Australia

Year	Passengers		Freight	
	Interstate	Intrastate	Interstate	Intrastate
			Short Tons	Short Tons
1957-58	267,656	69,571	8,995	1,148
1958-59	311,365	91,042	8,547	1,255
1959-60	356,826	106,401	8,560	1,430
1960-61	338,476	110,972	7,772	1,482
1961-62	333,909	112,202	7,100	1,491
1962-63	375,465	117,178	7,576	1,459
1963-64	417,101	131,339	8,152	1,469
1964-65	526,364	144,630	8,588	1,399
1965-66	620,210	148,847	10,623	1,339
1966-67	674,719	152,504	9,403	1,237

NOTE: Short ton = 2,000 lb.

Passenger and freight traffic at principal airports in South Australia are given below for the years 1965-66 and 1966-67. Aircraft movements (*i.e.* landings or take-offs) at Adelaide Airport reached a record level during 1965-66.

Principal Airports, South Australia

Passenger and Freight Traffic and Aircraft Movements

Airport	1965-66			1966-67		
	Passengers	Freight	Aircraft Movements	Passengers	Freight	Aircraft Movements
	No.	Short Tons	No.	No.	Short Tons	No.
Adelaide	738,402	11,748	19,933	770,408	12,022	19,311
Kingscote	42,197	204	1,512	44,764	220	1,533
Mount Gambier	20,016	111	1,256	19,085	106	1,248
Port Lincoln	41,024	426	1,969	42,643	366	1,791
Whyalla	24,692	209	1,298	27,710	211	1,162
Woomera	32,609	408	1,065	33,028	385	1,122

11.2 COMMUNICATION

CONTROL OF POSTS, TELEGRAPHS AND TELEPHONES

The postal, telegraphic, and telephonic services in Australia are under the control of the Postmaster-General pursuant to the provisions of the *Post and Telegraph Act* 1901-1966. The Director-General of Posts and Telegraphs controls the Commonwealth Department under the Postmaster-General, whilst the principal officer in each State is the Director of Posts and Telegraphs.

The Postmaster-General's Department works in close co-operation with three important agencies: the Overseas Telecommunications Commission, which is responsible for establishing, maintaining, and operating public cable and radio telegraph services with overseas countries, ships at sea, and aircraft in flight; the Australian Broadcasting Control Board, which ensures the provision of services by broadcasting stations and television stations in accordance with plans prepared by the Board; and the Australian Broadcasting Commission, which controls the activities of the National Broadcasting Service and the National Television Service.

As a result of Federation all the former colonial post and telegraph services were taken over by the Commonwealth on 1 March 1901.

EARLY HISTORY

Posts

Postal facilities were first established in South Australia on 10 April 1837 when the mails were received at a temporary hut on the bank of the River Torrens, where they were sorted and delivered.

During the next few years, with the increase in mail and the need for larger accommodation, the site of the Post Office was changed several times. Finally, in 1851 the General Post Office was removed to its present site at the corner of King William and Franklin Streets into a new building which housed the Metropolitan Police Station, Court House, and Post Office. The present General Post Office with its Victoria clock tower was completed in 1872 at a cost of between \$80,000 and \$100,000. The earlier Post Office was demolished in 1891, and additions to the new General Post Office were completed in 1893 to provide accommodation for the Telegraph Office.

Post offices were established at Port Adelaide and Port Lincoln in 1839 and fortnightly mails were introduced and carried by police between Adelaide, Morphett Vale, Willunga, and Encounter Bay. House to house deliveries by letter carriers began in South Adelaide at this time.

A Post Office Act passed in 1839 fixed the rate of inland postage at 3d. (2c) per letter or packet whilst the charges for ship letters remained at one penny (cent). A change in the letter rate of postage on inland letters was made to 2d. (2c) per ½ oz in 1854. Postage stamps, printed in England, were introduced in 1855 and prepayment of postage became compulsory; penny (cent) postcards were issued in December 1876. The money order department was opened in 1859, postal notes were issued in 1887, and in 1889 the parcels post was established.

Steam postal communication was inaugurated in 1852, and in the following year a contract was entered into for the conveyance of mails between England and Australia *via* Singapore, calling at Albany (King George Sound), Adelaide, Melbourne, and Sydney. During 1859 a fresh contract was signed for the conveyance of a monthly mail *via* Mauritius, receiving and delivering the South Australian mails at Kangaroo Island. This route was abandoned in favour of a service from Ceylon direct to Albany and thence to Melbourne. In 1862 the Government of South Australia accepted the tender of the Australian Steam Navigation Company for a branch mail service to Albany.

Telegraphs

The first Superintendent of Telegraphs and Observer was appointed in February 1855 and in December the first telegraph line in the colony was commenced from Adelaide to Port Adelaide. The line opened for business in February 1856.

A telegraph line between Adelaide and Melbourne was opened in 1858 and a second line was completed by the end of 1861; a direct line between Sydney and Adelaide was opened in 1867. In the meantime, the telegraph in South Australia had been extended to many new mining centres and other country areas.

On 22 August 1872 the 2,000 mile overland telegraph line from Port Augusta to Port Darwin was completed to form a link with the submarine cable from London which had already been extended from Java to Port Darwin. A line from Adelaide to Perth was opened in 1877.

Telephones

The first departmental trials of telephone communication in South Australia were made before the invention of the microphone, and in January 1878, communication was effected between Semaphore, Adelaide, and Kapunda, and later between Semaphore and Port Augusta. Another successful trial was made on the Adelaide-Darwin telegraph line between Beltana and Strangways Springs, a wire distance of 200 miles.

In May 1883 the Adelaide Telephone Exchange was opened with forty-eight subscribers and in September an exchange was opened at Port Adelaide. A telephone exchange building was erected adjoining the General Post Office in 1908.

A more detailed history of Posts, Telegraphs and Telephones was included in the *South Australian Year Book* 1967.

DEVELOPMENT OF SERVICES

Although there were 713 post offices and 304 telegraph stations in South Australia and Northern Territory in 1901, the number of post offices increased to 921 and the number of telegraph stations increased to 997 by 1966-67. Revenue from postal services in 1901 was approximately \$280,000 whereas in 1966-67 it amounted to \$9,939,000; telegraph and telephone revenue in 1901 was \$262,000 compared with \$2,521,000 telegraph revenue and \$26,990,000 revenue from telephone services in 1966-67. The number of telephone lines connected in 1901 was 1,831 whereas there were 203,191 services in operation at 30 June 1967.

Details of post offices in operation and the number of persons employed in postal services in South Australia for the years 1962-63 to 1966-67 are given in the tables below. All tables in this section include details for the Northern Territory as separate figures are not available.

Post Office: Number
South Australia and Northern Territory

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
Post Offices:					
Official	170	172	173	173	174
Non-official	754	753	752	751	747
Telephone Offices	106	110	108	105	103
Total	1,030	1,035	1,033	1,029	1,024

Non-official post offices are conducted by persons who are not members of the Commonwealth Public Service and who receive an allowance based on business transacted. In many instances this type of business is conducted in conjunction with some other business activity. Offices from which both trunk line and local calls may be made and at which telegrams can be lodged by members of the public, but which do not provide other postal facilities, are known as telephone offices.

Post Offices: Employment^(a)
South Australia and Northern Territory

Persons Employed	1962-63	1963-64	1964-65	1965-66	1966-67
Direct Employees:					
Permanent Officers	6,499	6,649	6,650	7,026	7,335
Temporary and Exempt Employees	2,181	2,356	2,517	2,347	2,252
Total	8,680	9,005	9,167	9,373	9,587
Other:					
Non-official and Semi-official Postmasters	924	943	931	751	748
Persons exclusive of Postmasters employed at Non-official offices				194	201
Telephone Office Keepers	104	108	108	104	99
Mail Contractors	279	355	363	339	336
Total	1,307	1,406	1,402	1,388	1,384
Total all employees.	9,987	10,411	10,569	10,761	10,971

(a) 'Direct Employees' are full-time staff directly under the control of the P.M.G.'s Department including temporary staff but excluding part-time staff (273 at 30 June 1967) while 'Other' employees include staff engaged, either full-time or part-time, under contract or in return for payment appropriate to work performed.

Revenue and Expenditure

The Post Office maintains a system of financial and management accounts. These accounts, known as its commercial accounts, are quite distinct from the cash accounts maintained to meet Treasury requirements. The latter accounts record cash receipts paid into the Commonwealth Public Account and the cash payments made from funds appropriated by the Federal Parliament for Post Office purposes.

Cash receipts and payments of the Postmaster-General's Department in South Australia for the years 1962-63 to 1966-67 are given in the following tables. The figures exclude trust fund transactions *e.g.* pension payments, Commonwealth Savings Bank operations, etc. Cash expenditure on capital works for the last five years is shown in a separate table.

Postmaster-General's Department: Revenue
South Australia and Northern Territory

Year	Postal	Telegraph	Telephone	Other	Total Revenue
			\$'000		
1962-63 ..	8,276	1,592	16,508	46	26,422
1963-64 ..	8,664	1,852	19,180	46	29,742
1964-65 ..	9,285	2,187	23,038	27	34,536
1965-66 ..	9,670	2,398	24,757	89	36,914
1966-67 ..	9,939	2,521	26,990	179	39,629

Postmaster-General's Department: Non-Capital Expenditure
South Australia and Northern Territory

Year	Salaries and Payments in Nature of Salary	Administrative Expenses	Stores and Material	Mail Services	Engineering Services	Rent, Repairs and Maintenance	Total Non-Capital Expenditure
				\$'000			
1962-63	9,738	1,140	394	880	6,092	402	18,646
1963-64	10,274	1,480	324	926	7,940	392	21,336
1964-65	11,399	1,591	332	979	8,428	481	23,211
1965-66	12,124	1,740	407	1,018	9,155	604	25,048
1966-67	13,557	1,470	898	1,076	9,615	660	27,276

NOTE: expenditure from Ordinary Service Votes; expenditure on motor vehicles, postal plant and certain non-engineering plant now included under capital works expenditure.

Postmaster-General's Department: Capital Works Cash Expenditure
South Australia and Northern Territory

Year	Telephone Services	Telegraph Services	Other Plant and Equipment and Motor Vehicles	Buildings	Sites and Properties	Total
			\$'000			
1962-63	10,176	142	1,026	916	34	12,294
1963-64	11,138	176	1,166	1,204	44	13,728
1964-65	13,834	210	1,181	1,111	149	16,485
1965-66	14,252	270	1,248	1,004	85	16,859
1966-67	15,151	235	1,350	1,430	27	18,192

Postal Articles Handled

Articles handled by the Postmaster-General's Department in South Australia and Northern Territory during the years 1962-63 to 1966-67 are shown in the following table.

Postal Articles Handled
South Australia and Northern Territory

Year	Letters and Postcards	Newspapers and Packets	Parcels (a)	Registered Articles	All Articles
	'000				
Posted for delivery:					
Within Australia;					
1962-63	147,962	14,185	1,253	749	164,149
1963-64	156,379	16,463	1,310	756	174,908
1964-65	165,279	16,901	1,327	696	184,203
1965-66	177,760	17,067	1,337	782	196,947
1966-67	169,756	18,245	1,404	788	190,193
Beyond Australia;					
1962-63	5,523	848	40	61	6,472
1963-64	6,410	900	41	54	7,405
1964-65	7,247	1,184	46	59	8,536
1965-66	7,979	1,507	51	62	9,599
1966-67	8,270	1,302	62	62	9,696
Received from beyond					
Australia:					
1962-63	3,241	4,977	72	28	8,318
1963-64	4,479	5,111	80	28	9,698
1964-65	5,571	5,467	88	30	11,156
1965-66	6,332	5,321	100	31	11,785
1966-67	5,912	4,873	114	32	10,931

(a) Includes registered parcels.

Money Orders and Postal Orders

The number of money orders issued in Australia in 1944-45 was approximately 3.5 million, whereas in 1966-67 12.6 million were issued. On the other hand, the number of postal orders issued declined from 22.7 million issued in 1944-45 to approximately 13.5 million in 1966-67. In South Australia money orders and postal orders paid in 1944-45 amounted to \$2,995,000 and \$1,072,000 respectively; in 1966-67 the corresponding values were \$36,945,000 and \$1,528,000.

Total commission charged on money orders issued in 1966-67 amounted to \$231,000. The fee on postal orders issued in 1966-67 amounted to \$127,000.

Money Orders Issued and Paid
South Australia and Northern Territory

Year	Money Order Offices	For Payment Within Australia				For Payment Beyond Australia			
		Number Issued	Value	Number Paid	Value	Number Issued	Value	Number Paid	Value
	Number	'000	\$'000	'000	\$'000	'000	\$'000	'000	\$'000
1962-63	531	(a) 962	(a) 25,910	(a) 899	(a) 25,065	54	350	15	192
1963-64	535	(a) 1,050	(a) 28,254	(a) 970	(a) 27,319	57	376	16	236
1964-65	543	1,040	31,910	1,036	30,944	61	413	19	293
1965-66	547	1,200	34,759	1,103	33,867	67	425	22	359
1966-67	549	1,219	37,314	1,145	36,531	74	462	23	414

(a) Includes official money orders used in bringing to account Telephone Account collections and War Service Homes repayments.

Postal Orders^(a) Issued and Paid
South Australia and Northern Territory

Year	Postal Order Offices	Postal Orders Issued		Postal Orders Paid	
		Number	Value	Number	Value
	Number	'000	\$'000	'000	\$'000
1962-63	924	3,059	2,852	922	1,114
1963-64	925	2,951	2,814	938	1,138
1964-65	925	3,158	3,083	951	1,169
1965-66	923	3,162	3,165	947	1,165
1966-67	910	2,935	3,438	970	1,528

(a) Postal notes replaced by postal orders on 1 June 1966.

Telegraph System

Australia's up-to-date telegraph service, known as TRESS (Teleprinter Repertorator Switching System) was first introduced in South Australia in 1959, before being extended to the other States. This system, using teleprinters and automatic switching apparatus, has eliminated the intermediate handling of telegraph traffic, resulting in greater speed and economy.

Another telegraph service known as TELEX has been available to Post Office customers in South Australia since 1957. TELEX subscribers are provided with a teleprinter in their own premises and may be connected through the teleprinter exchange with other TELEX subscribers anywhere in Australia and in a number of overseas countries. Since 1957, when there were 18 subscribers in South Australia, the number had grown to 328 at 30 June 1967.

The number of telegraph stations, the number of telegrams dispatched and received, and some information on the operations of TELEX during the years 1960-61 to 1966-67 are shown below.

Telegraph Services
South Australia and Northern Territory

Year	Telegraph Stations	Telegrams			Teleprinter Exchange	
		Dispatched within Australia	Dispatched beyond Australia	Received from beyond Australia	Subscribers	Number of Calls (a)
	Number	'000	'000	'000	Number	'000
1960-61	986	1,731	82	69	79	47
1961-62	998	1,714	77	69	100	62
1962-63	1,028	1,783	80	72	122	98
1963-64	1,008	1,863	85	79	161	144
1964-65	1,004	2,009	99	83	215	196
1965-66	997	2,129	106	86	243	254
1966-67	997	2,091	110	94	328	502

(a) Includes official Post Office traffic.

The Post Office picturegram service is used extensively by Adelaide newspapers to send and receive photographs to and from other parts of Australia and overseas countries for publication within a few hours of being taken. This service is also used by business and professional people to transmit photographs of documents, X-rays, and other matter capable of being photographed.

Telephone Services

The Post Office has continued to provide additional subscriber services, more and better trunk line circuits, and has installed automatic telephone exchanges. Between 1945 and 1967 the number of trunk line channels in the State increased from 760 to 4,502 and the number of country automatic telephone exchanges from 20 to 289. There are 67 automatic exchanges in the Adelaide Telephone District.

Steady progress is being made towards the Post Office objective of nationwide subscriber to subscriber direct trunk dialling, known in Post Office language as S.T.D. or Subscriber Trunk Dialling. The provision of S.T.D. facilities at telephone exchanges in South Australia has increased rapidly since its introduction in January 1967 and by April 1968 was available to approximately 40,000 subscribers. It is anticipated that a further 60,000 subscribers will be connected to the system by the end of 1968.

At 14 April 1968 access from ten exchanges in the Adelaide Telephone District had been provided to and from capital cities in the eastern States and some country areas of New South Wales, Victoria and Tasmania. It is expected that an additional nine exchanges will have similar interdialling facilities and access will be extended to some country areas of Queensland by November 1968.

No telephone exchange in the Adelaide Telephone District is provided with trunk dialling access to any country exchange in South Australia. However, limited S.T.D. facilities are available from four country districts viz Murray Bridge, Port Augusta, Port Elliot and Victor Harbor from which subscribers are able to dial into Adelaide only.

There will be a gradual increase in the number of country exchanges which will have access to exchanges in the Adelaide Telephone District within the next twelve months. A new trunk switching exchange is being installed in Adelaide and when completed most Adelaide metropolitan area subscribers will be able to dial direct to capital cities and country areas in eastern States. The new exchange will also provide for two-way direct dialling between two country districts (Gladstone and Mount Gambier) and Adelaide, Melbourne, Sydney, Hobart and Brisbane; interstate country areas; and between each other: facilities will also be provided for two other country districts (Murray Bridge and Gawler) to have two-way dialling with Adelaide and to receive inward traffic from the other centres.

Telephone Services South Australia and Northern Territory

At 30 June	Telephone Exchanges	Telephone Services						Trunk Line Channels in Service
		Ordinary Exchange	Duplex	Party Line	Private Branch Exchange	Public Telephones	Total	
1961.....	739	123,198	2,972	1,670	14,541	2,121	144,502	2,262
1962.....	737	131,328	2,710	1,656	14,878	2,213	152,785	2,483
1963.....	740	139,484	2,366	1,600	16,231	2,331	162,012	2,752
1964.....	742	150,615	1,948	1,562	16,796	2,393	173,314	2,991
1965.....	743	158,973	1,624	1,510	17,615	2,527	182,249	3,403
1966.....	743	169,381	1,132	1,459	18,331	2,619	192,922	3,976
1967.....	738	179,271	694	1,452	19,091	2,683	203,191	4,502

Metropolitan services are all operated through automatic exchanges, whereas at 30 June 1967, 39,489 country services were automatic and 32,018 services were manually connected. Metropolitan services totalled approximately 132,000 and of these 85,000 were residence services. In the country, business phone services accounted for the larger share (about 64 per cent) of services.

Other Operations

Details of radio and television stations under the control of the Postmaster-General in South Australia are shown in the following table.

Radio and Television Stations, South Australia^(a)

At 30 June

Radio Communication Stations	1963	1964	1965	1966	1967
Broadcasting:					
National	8	8	8	8	8
Commercial	8	8	8	8	8
Television:					
National	1	1	2	3	3
Commercial	2	2	2	4	4
Transmitting and receiving:					
Fixed;					
Aeronautical	6	5	5	5	5
Outpost	187	183	179	178	169
Other	90	97	57	72	67
Land;					
Aeronautical	11	8	8	10	15
Base stations for mobile services	395	427	474	543	618
Coast	14	14	16	21	22
Special experimental ...	40	44	51	56	53
Mobile	4,754	5,394	6,251	7,223	8,121
Amateur	586	615	649	678	702
Total stations	6,102	6,806	7,710	8,809	9,795

NOTE: A fixed station is established at a fixed location for the exchange of radio messages with other fixed stations whereas a land station is established at a fixed location for the exchange of radio messages with mobile stations. An outpost station is established in an outback area and communicates with control stations operated by such organisations as the Royal Flying Doctor service.

(a) Excludes stations in Northern Territory.

Following amendments to the Broadcasting and Television Act, a new type of receiving licence was introduced on 1 April 1965. The new licence, Combined Receiving Licence, is issued to persons owning both a broadcast and television receiver at the one address and replaces the individual licences formerly held although broadcast listeners' licences and television viewers' licences are still issued to persons owning only one type of receiver.

The number of broadcast listeners' licences, television viewers' licences and combined receiving licences in force at 30 June 1963 to 1967 and revenue from these licences during the years 1962-63 to 1966-67 are given in the following table.

**Broadcast Listeners' and Television Viewers' Licences
South Australia and Northern Territory**

Item	Unit	1962-63	1963-64	1964-65	1965-66	1966-67
Listeners' Licences (a)	Number (b)	256,741	266,027	219,064	93,052	74,076
Viewers' Licences (a)	Number (b)	167,502	194,430	158,667	45,031	50,511
Combined Licences	Number (b)	—	—	49,976	188,695	203,993
Revenue	\$'000	2,837	3,063	3,586	3,832	4,101

(a) Includes Hirers' and Short-term licences.

(b) At 30 June.

Television viewers' licences totalled 6,124 at 30 June 1959, although the official opening of the first station was in September 1959. Further information on radio and television services is contained in Part 6.4 under the heading of Culture and Recreation.

PART 12

PUBLIC FINANCE

12.1 STRUCTURE OF PUBLIC FINANCE

The collection of public revenue and the expenditure of public moneys in South Australia are the responsibility of three groups of authorities:

- (i) State Government and semi-government.
- (ii) Commonwealth Government.
- (iii) Local government.

The power to raise revenue from taxation is vested in the various Governments and authorities by Acts of Parliament. Other revenue comes from the proceeds of the sale of goods and services to the public and to other Governments and authorities. A major proportion of the revenue of the State Government, and a smaller proportion of the revenue of local government and some semi-government authorities is derived from grants from other levels of Government: grants are made by the Commonwealth to the State Government and by the latter to semi-government and local government bodies. A further source of funds is the loan market: Government securities are issued for loan raisings in Australia and overseas.

Authorisation for expenditure by State and Commonwealth Government departments is given by Appropriation Acts or by Special Acts of their respective Parliaments. Each State semi-government undertaking derives its authority for expenditure from the provisions of the specific Act under which it has been set up. The Local Government Act, 1934-1967, contains sections relating to the expenditure of local government moneys.

The following sections of this chapter provide some details of the financial transactions of the government sector in South Australia. Special attention is given to transactions within the State Government budget, transactions of a number of semi-governmental authorities, and transactions of all local government authorities. In addition, details of some Commonwealth Government expenditures are included.

Commonwealth Government Transactions

Reference is made to the revenue and expenditure of the Commonwealth Government only to the extent that it affects the finances of the State Government. As indicated in more detail below, not all of the transactions listed relate directly to the State budget; many of the items are negotiated wholly through State Trust Funds. The transactions which are included represent only a small proportion of total expenditure by the Commonwealth Government within South Australia. Greater detail of Commonwealth Government finance may be obtained from the Year Book of the Commonwealth of Australia.

State Government Budget

Statistics relating to the State Government budget are derived from accounts prepared by the Treasurer each year and included in the Report of the Auditor-General of South Australia. These accounts, which are on a cash basis, cover the Consolidated Revenue Account which in general terms is the current account of the Government, and the Loan Fund through which is handled the receipt and disbursement of all moneys raised by public borrowing.

State Government budget receipts include (in addition to loan raisings) taxation, proceeds of sale of goods and services by trading undertakings, some of the grants made by the Commonwealth Government, fees, rents, recoups and other sundry items. State Government disbursements are made for capital works, for provision of services (such as health, education and water supply), for general administrative expenses, and for interest and redemption payments.

The State Government budget excludes many transactions negotiated through State Government Deposit and Suspense Accounts (including working accounts) and trust funds. The volume of such transactions is considerable. For example, road works financed through Road Maintenance Act charges and by Commonwealth Aid Roads grants are handled through working accounts, as are the operating costs and revenue of the Woods and Forests Department.

Government of South Australia, Sources and Disposal of Funds at 30 June 1967

Sources and Nature of Funds	\$'000	\$'000	\$'000
Public Debt:			
Securities Current at 1 July 1966		955,128	
New Loans Raised during 1966-67		154,688	
		<hr/>	
		1,109,816	
Less: Securities Redeemed and Converted		96,757	
		<hr/>	
Public Debt at 30 June 1967			1,013,060
Other Interest Bearing Indebtedness:			
Trust Fund Balances			10,637
Liabilities to Commonwealth:			
Railway Standardisation and Equipment Agreements ..			9,115
Housing Agreements			182,132
Other			(a)
Non-Interest Bearing Indebtedness:			
Trust Fund Balances			2,419
Departmental Balances and Other Funds:			
Deposit and Suspense Accounts		15,135	
Less: Departmental Advances	214		
Payments in Suspense	20	234	14,901
		<hr/>	
			1,232,264

(a) Less than \$500.

Government of South Australia, Sources and Disposal of Funds (continued)

Disposal of Funds	\$'000	\$'000	\$'000
Loan Account:			
Total of Loan Works at 1 July 1966		957,594	
Payments during 1966-67 (b)		78,784	
		<hr/>	
		1,036,377	
Less: Repayments	11,156		
Securities Cancelled	10,956	22,112	
		<hr/>	
Loan Works Account Balances at 30 June 1967			1,014,266
Consolidated Revenue Account:			
Deficit at 1 July 1966		5,612	
Receipts for Year	258,823		
Payments for Year	258,717		
		<hr/>	
Surplus for Year		106	
Deficit at 30 June 1967			5,505
Railway Standardisation and Equipment:			
Improvements and Advances			9,115
Housing Agreements:			
Advances to S.A. Housing Trust		110,452	
Advances to Home Builders Fund		71,680	
		<hr/>	
Cash at Bank			182,132
			21,246
			<hr/>
			1,232,264

(b) Includes \$975,140 nominal increase in Loan Account.

Some idea of the framework of the various funds may be obtained from the preceding table showing sources and disposal of funds in which the balances of Trust Funds and of Deposit and Suspense Accounts appear as specific lines. However, figures for the total financial transactions of the State Government, that is the budget transactions plus transactions negotiated through working and trust accounts, are not available.

Semi-Governmental Accounts

Most of the details included are based on the Auditor-General's annual reports prepared for a number of semi-governmental business undertakings, including those engaged in banking. Information is given from both revenue statements and balance sheets.

Local Government Accounts

Details included for Local Government Authorities are based on the cash statement of receipts and payments prepared each year by every council for the Local Government Department. Details of loan receipts and payments are included in these statements.

12.2 COMMONWEALTH-STATE FINANCIAL RELATIONS

Since Federation, the Commonwealth has made payments of various descriptions to the States. Prior to the 1939-45 War, Commonwealth payments were mainly of a marginal character and were confined, for the most part, to special

grants to assist the financially weaker States and to certain specific purpose grants relating to such matters as Commonwealth assistance for roads and contributions under the Financial Agreement.

Since the 1939-45 War and the immediate post-war period there has been a marked increase in the amount and variety of Commonwealth assistance to the States. This has reflected, among other things, increases in the range and variety of governmental activities which have accompanied economic and social developments in this period of rapid growth of the Australian economy; greater participation by the Commonwealth in matters which were previously considered to be the sole responsibility of the States; and the effects of the introduction and continuation of uniform income tax and of other changes on the basic allocation of financial resources between the Commonwealth and the States.

There are various ways of classifying Commonwealth payments to the States. They may be classified as 'capital' as opposed to 'current' transactions; to general purpose grants compared with payments for purposes specified by the Commonwealth; or in accordance with the constitutional authority under which the payments are made. Much of the recent proliferation of grants has been for purposes specified by the Commonwealth, and instituted under Section 96 of the Constitution.

THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT

Prior to Federation in 1901, each State exercised the right to raise its own revenue by means of various forms of taxation, customs and excise duties (including interstate customs), fees for services, licence fees, etc.

Under the Commonwealth Constitution the Commonwealth Government assumed responsibility for certain activities; was vested with the power to levy income tax in addition to the States; and took over from the States the right to raise customs and excise duties, interstate customs being abolished.

The States were compensated for their loss of revenue by the provisions of section 87 (known as the Braddon Clause) of the Constitution, which reads:

'During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.'

The scheme of allocation among the States is laid down in sections 89 and 93.

Under the *Surplus Revenue Act* 1910, the Commonwealth was to retain the whole of the customs and excise revenue and make a fixed annual payment of two dollars fifty cents per head of population to each State for a period of ten years. Although there were moves to have it changed, this method of payment continued until 1927.

Commonwealth subsidy paid to South Australia under Section 87 of the Constitution was \$1,685,016 for 1909-10; under the *Surplus Revenue Act* 1910. the subsidy was \$1,029,244 for 1910-11.

FINANCIAL AGREEMENT 1927

With the repeal of the *Surplus Revenue Act* 1910, the States were faced with the total loss of *per capita* payments, and this led to the financial agreement between the Commonwealth and the States on 12 December 1927. It was later affected by agreements made under the powers of section 105A of the Constitution which was amended in 1928. The main features of the financial agreement were:

- (i) The taking over of the public debts of the States by the Commonwealth; but leaving the States with the obligation to find the interest.
- (ii) The payment by the Commonwealth to the States of an annual fixed amount of \$15,169,824 (an amount equal to the *per capita* payments for 1926-27) as a contribution towards interest on State debts.
- (iii) The provision of sinking funds to repay the debt.
- (iv) The establishment of an Australian Loan Council.

SPECIAL GRANTS

The Constitution provides, in section 96, for the granting of special financial assistance to the States. Prior to 1933, financial assistance of varying amounts was granted to South Australia, Western Australia, and Tasmania.

In 1933, the Commonwealth Government appointed the Commonwealth Grants Commission, of three members, to inquire into and report upon claims made by any State for a grant of financial assistance and any matters relevant thereto. From 1933 applications were lodged by the three States already mentioned. Western Australia and Tasmania have applied each year to date but South Australia agreed with the Commonwealth not to apply for special grants in other than exceptional circumstances after 1 July 1959 when new financial arrangements, under the *States Grants Act* 1959, came into operation.

FINANCIAL ASSISTANCE GRANTS

Financial assistance grants, formerly called tax reimbursements grants make up the bulk of the assistance provided for general revenue purposes and are determined annually on the basis of an agreed formula. In 1942 uniform taxation of incomes throughout Australia was introduced by the Commonwealth Government to implement its financial policy for meeting the exigencies of war finance. The Commonwealth became the sole authority levying taxes upon incomes from 1 July 1942 to the end of the first full financial year after the cessation of the war. Each State received an annual payment from the Commonwealth, as reimbursement for loss of income tax revenue, under the *States Grants (Income Tax Reimbursement) Act* 1942. A similar arrangement was made under the *State Grants (Entertainments Tax Reimbursement) Act* 1942.

The Acts of 1942 were repealed in 1946 by the States Grants (Tax Reimbursement) Act which prescribed a fixed grant for each of the financial years 1946-47 and 1947-48 and, for subsequent years, an amount to be varied in accordance with changes in population and in average wages per person employed.

With the increasing financial needs of the States it became necessary for the Commonwealth to make grants in excess of those prescribed in the 1946 Act. Financial aid was extended by a States Grants (Special Financial Assistance) Act passed each year from 1951 to 1958 and by the States Grants (Additional Assistance) Act of 1958.

The *States Grants Act 1959*, repealed the *States Grants (Tax Reimbursement) Act* and provided for a new system of annual payments which were described as 'financial assistance' grants. The Act incorporated an arrangement designed to eliminate the need for supplementary grants by providing for adjustment of grants each year according to variations in population and increases (if any) in average wage per person employed; the latter included what became known as a 'betterment' factor. This legislation has been superseded by the *States Grants Act 1965-1967* which retained the basic framework of the 1959 Act but increased the 'betterment' factor by making it 1.2 per cent of the total grant otherwise determined for each year: this Act also provided for an increase in the first year grant to Victoria, and a cumulative increase in the basic grant to Queensland.

The 1965 Act provided for consultation between the Commonwealth and the States concerning review of the legislation in relation to years subsequent to 1969-70 or earlier years in the event of substantial change in the financial relationships between the Commonwealth and a State or States.

OTHER FINANCIAL ASSISTANCE

In addition to the grants under the Financial Agreement, the special grants recommended by the Commonwealth Grants Commission, and the financial assistance grants, the Commonwealth makes payments to the States for specific purposes, some details of which are given below.

Grants for road works have been made since 1923, and from 1931 to 1958 were based on a percentage, varied from time to time, of Commonwealth petrol taxation. A new scheme of Commonwealth assistance to the States for roads was established by the *Commonwealth Aid Roads Act 1959*. The Commonwealth undertook to provide \$500,000,000 for distribution, according to stated criteria, to the States during the five years to 30 June 1964. The *Commonwealth Aids Roads Act 1964* stipulated a sum of \$750,000,000 for distribution to the States during the five years from 1 July 1964. The criteria for distribution to the States, and South Australia's share of these grants, are mentioned in references and text given in Part 8.3 Road.

Up to 30 June 1967 the Commonwealth had provided \$30,960,000 under the *Railway Standardization (South Australia) Agreement Act 1949*. The Commonwealth had also provided \$2,635,000 under the *Railway Equipment Agreement (South Australia) Act 1961* for the purchase of locomotives and wagons for the carriage of ore from Broken Hill to Port Pirie. Over a period of fifty years the State must repay 30 per cent of the amount provided by the Commonwealth under these two agreements.

Under the *Tuberculosis Act 1948*, States are reimbursed by the Commonwealth for expenditure of a capital and maintenance nature on the provision of facilities for the diagnosis, treatment and control of tuberculosis.

The *States Grants (Mental Institutions) Act 1955* provided for financial assistance to the States for capital expenditure on mental institutions to a maximum of \$20,000,000. This Act was replaced by the *States Grants (Mental Health Institutions) Act 1964* under which the States are entitled to receive assistance amounting to one-third of the total expenditure incurred by them, with Commonwealth approval, in building and equipping mental health institutions.

Payments to the States for recurrent expenditure of universities commenced in 1951-52. Grants for capital works and equipment for universities were introduced in 1958. Under the *Universities (Financial Assistance) Act* 1966 the States are to receive total payments of \$175,600,000 during the period of three calendar years 1967 to 1969 towards recurrent and capital expenditure of universities.

During 1964 and 1965 the Commonwealth introduced several types of grants designed to assist education and research in the States. These relate to science laboratories in Government and private secondary schools, training of persons for employment in trade and technical occupations, education in non-university tertiary institutions, (colleges of advanced education) and approved research projects.

Also in 1964 the Commonwealth authorised payments to assist in the investigation and measurement of river and underground water resources.

For more complete historical and current information on Commonwealth financial assistance to the States reference should be made to the most recent issue of the bulletin *Commonwealth Payments to or for the States*.

The following table shows the pattern of Commonwealth payments to or for the State of South Australia since the financial agreement in 1927.

Commonwealth Payments To or For the States^(a), South Australia

Particulars	1929-30	1939-40	1949-50	1959-60	1966-67
	\$'000				
Financial Agreement :					
Interest on State Debt	1,408	1,408	1,408	1,408	1,408
Sinking Fund on State Debt	254	360	488	1,583	2,482
Special Grants	720	1,990	8,348	2,852	—
Financial Assistance Grants (tax reimbursements)	—	—	10,734	55,350	94,346
Commonwealth Aid Roads Act	522	1,006	2,039	9,846	17,222
Grants to Universities	—	—	—	1,787	5,075
Science Laboratories and Technical Training ..	—	—	—	—	1,740
Research Grants	—	—	—	—	352
Mental Health Institutions—Contributions to Capital Expenditure	—	—	—	184	193
Tuberculosis Act, 1948—Reimbursement of Capital Expenditure	—	—	—	214	5
Blood Transfusion Services	—	—	—	32	123
Road Safety Practices	—	—	14	23	15
Natural Disaster Payments	—	—	—	70	—
Agricultural Extension Services	—	—	30	102	217
Water Resources Investigations	—	—	—	—	63
Eyre and Barkly Highways	—	—	(b)	27	25
Railway Projects	—	40	40	102	6,929
Colleges of Advanced Education	—	—	—	—	891
Softwood Forestry	—	—	—	—	90
Minor Agricultural Research	—	—	—	—	3
Migrant Centres	—	—	—	—	2
Morgan-Whyalla Waterworks	—	—	50	—	—
Price Control Reimbursements	—	—	148	—	—
Coal Strike Emergency Grant	—	—	1,347	—	—
Total	2,904	4,804	24,646	73,580	131,181

(a) Excludes assistance for relief to primary producers and payments for medical research, Social Services, etc.

(b) Payments from 1 July 1947 to 30 June 1959 were made from Commonwealth Aid Roads Trust Account and details are not available.

NATIONAL WELFARE FUND

The States also receive, from the Commonwealth through the National Welfare Fund, payments in respect of hospital and pharmaceutical benefits, nutrition of children and reimbursement of maintenance expenditure on tuberculosis sanatoria. In South Australia the receipts are paid into the Consolidated Revenue Account (or a suspense account in the case of the payment for free milk for school children). Receipts for the year 1966-67 were hospital benefits \$1,238,000, pharmaceutical benefits \$986,000, free milk for school children \$857,000, tuberculosis reimbursement of maintenance expenditure and surveys \$708,000.

The amounts stated above for hospital and pharmaceutical benefits relate to particular classes of patients and a limited range of drugs in government hospitals and are only a small portion of the total hospital and pharmaceutical benefits (see pages 212-5) which are paid from National Welfare Fund to or for residents of this State.

12.3 STATE GOVERNMENT FINANCE

As indicated earlier State Government accounting in South Australia is on a 'cash' basis. Receipts and payments fall into five main divisions, viz the Consolidated Revenue Account and Loan Fund (which together constitute the budget sector), Special Commonwealth Advances, Trust Fund Accounts and Deposit and Suspense Accounts.

CONSOLIDATED REVENUE ACCOUNT

This account is credited with receipts from State taxation, fees, licences, and charges for services, recoveries of interest and sinking fund, sales of Crown lands, and Commonwealth tax reimbursement and some other Commonwealth grants. The account is debited with the cost of revenue collection, legislative and administrative functions, interest and sinking fund on the public debt, provision of social services, operation of public undertakings and development of State resources. The resultant balance represents the State's surplus or deficit for the year. A table showing receipts and payments for the financial year 1966-67 and four earlier years is set out below.

Consolidated Revenue Account, South Australia

Particulars	1929-30	1939-40	1949-50	1959-60	1966-67
			\$'000		
Receipts	21,102	25,511	58,721	160,555	258,823
Payments	24,354	25,837	59,100	161,177	258,717
Surplus	-3,252	-325	-379	-622	106

Per Head of Population					
	\$	\$	\$	\$	\$
Receipts	36.37	42.72	85.50	171.99	234.45
Payments	41.97	43.28	86.05	172.65	234.35

Sources of Revenue

The sources of revenue for the financial years 1962-63 to 1966-67 were as follows:

Consolidated Revenue Account: Sources of Revenue, South Australia*Total Revenue*

Source of Revenue	1962-63	1963-64	1964-65	1965-66	1966-67
			\$'000		
Taxation	26,940	29,825	34,901	36,852	42,270
Business undertakings	57,727	62,904	63,887	66,597	69,996
Territorial: Land sales, rents, etc.	1,683	2,009	2,193	2,067	2,120
Other :					
Interest and exchange	16,220	17,280	18,148	19,167	19,868
Fees, fines, rents, etc. ..	17,632	19,327	23,489	24,258	28,816
Commonwealth Grants (a)	74,965	79,660	79,563	87,875	95,753
Total	195,168	211,006	222,181	236,816	258,823

Per Head of Population

			Dollars		
Taxation	26.98	29.14	33.17	34.06	38.29
Business undertakings	57.81	61.46	60.72	61.56	63.40
Territorial: Land sales, rents, etc.	1.69	1.96	2.08	1.91	1.92
Other :					
Interest and exchange	16.24	16.88	17.25	17.72	18.00
Fees, fines, rents, etc. ..	17.66	18.88	22.33	22.42	26.10
Commonwealth Grants (a)	75.08	77.84	75.62	81.23	86.74
Total	195.46	206.17	211.18	218.90	234.45

Proportion of Total Revenue

			Per Cent		
Taxation	13.80	14.14	15.71	15.56	16.33
Business undertakings	29.58	29.81	28.75	28.12	27.04
Territorial: Land sales, rents, etc.	0.86	0.95	0.99	0.87	0.82
Other :					
Interest and exchange	8.31	8.19	8.17	8.09	7.68
Fees, fines, rents, etc. ..	9.04	9.16	10.57	10.25	11.13
Commonwealth Grants (a)	38.41	37.75	35.81	37.11	37.00
Total	100.00	100.00	100.00	100.00	100.00

(a) Includes grants under Financial Agreement and Financial Assistance Grants (originally titled 'Tax Reimbursement').

Taxation

Until the introduction of the uniform income tax scheme in 1942-43, income tax was the major source of taxation revenue in South Australia. Revenue from this form of taxation for the years 1939-40 to 1941-42 was \$4,718,000, \$4,952,000 and \$5,638,000 respectively or 51.70 per cent, 57.02 per cent, and 59.45 per cent of total revenue from taxation.

Other forms of State taxation are included in the table for the financial years 1962-63 to 1966-67; the major forms of taxation now left to the State are motor tax, succession and stamp duties, and land tax.

Revenue from Taxation, South Australia

Tax	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Land tax	4,914	4,899	4,969	5,638	7,646
Succession duties	5,250	6,160	6,604	6,134	7,323
Racing tax (a)	1,467	1,468	1,664	1,676	1,588
Motor tax	9,744	10,651	(b) 11,398	(b) 11,917	(b) 12,466
Stamp duties	4,621	5,383	8,636	9,764	10,938
Liquor licences	443	747	1,095	1,142	1,672
Other licences	212	206	195	220	227
Hospital rating	289	311	341	361	409
Total (c)	26,940	29,825	34,901	36,852	42,270

Proportion of Total Taxation

	Per Cent				
Land tax	18.24	16.43	14.24	15.30	18.09
Succession duties	19.49	20.65	18.92	16.65	17.32
Racing tax (a)	5.45	4.92	4.76	4.55	3.76
Motor tax	36.17	35.71	(b) 32.66	(b) 32.33	(b) 29.49
Stamp duties	17.15	18.05	24.74	26.49	25.88
Liquor licences	1.65	2.51	3.14	3.10	3.96
Other licences	0.78	0.69	0.56	0.60	0.54
Hospital rating	1.07	1.04	0.98	0.98	0.97
Total	100.00	100.00	100.00	100.00	100.00

(a) Amounts retained by racing and trotting clubs, or paid to those clubs by Betting Control Board are excluded. For the years 1962-63 to 1966-67 these amounts were: \$1,112,000, \$1,146,000, \$1,298,000, \$1,227,000 and \$1,251,000.

(b) Excludes road maintenance charges which were, for the years 1964-65 to 1966-67 respectively, \$1,426,000, \$1,903,000 and \$2,070,000.

(c) Excludes amounts paid to Hospitals Fund from lotteries and T.A.B., \$50,000 and \$88,000 respectively in 1966-67 during which year they commenced operations.

In addition to the fields of taxation open to the State Government, there are fields of taxation in which the Commonwealth Government has sole taxing authority, e.g. customs and excise duties (since Federation), sales tax, etc. Prior to 1942 the Commonwealth Government levied income tax in addition to that imposed by the States, but since the commencement of uniform taxation the Commonwealth Government has been the sole levier of income tax in practice, although the States may still legally operate in this field. Total taxation collected by the

Commonwealth Government in South Australia far exceeds that received into the State Consolidated Revenue Account; this is evident from the following table for the years 1962-63 to 1966-67.

Commonwealth Taxation Collected, South Australia

Tax	1962-63	1963-64	1964-65	1965-66	1966-67
			\$'000		
Income tax	114,797	135,569	176,310	188,763	192,760
Sales tax	26,392	28,431	33,224	31,014	30,253
Payroll tax	10,673	11,520	13,168	13,877	14,505
Customs duties	15,070	14,031	16,398	15,002	15,228
Excise duties (a)	42,697	45,368	50,363	62,295	65,889
Estate duty	3,020	3,212	4,584	3,958	4,110
Gift duty	775	772	1,053	731	707
Wool tax	709	736	1,507	1,912	1,958
Stevedoring industry charge	860	978	1,015	917	934
Other	287	298	346	299	355
Total	215,280	240,914	297,969	318,768	326,699
Per head of population	\$ 215.60	\$ 235.39	\$ 283.21	\$ 294.65	\$ 295.93

(a) Excludes net diesel fuel tax, non-commercial users.

Business Undertakings

Business undertakings supply such services as passenger and freight rail carriage, sewerage, water supply, water storage, harbor facilities, etc. Produce stores provide refrigeration for the storage of goods in Adelaide whilst at Port Lincoln lambs, pigs and cattle are treated for export or local consumption. Revenue from business undertakings for the financial year 1938-39 was \$9,914,000, for 1956-57 \$47,409,000 and for 1966-67 it was \$66,996,000. Total revenue from business undertakings during each of the last five years and the proportion of that revenue to total Consolidated Revenue are shown on page 518. A dissection of revenue from business undertakings is given in the following table.

Revenue from Business Undertakings, South Australia

Undertaking	1962-63	1963-64	1964-65	1965-66	1966-67
			\$'000		
Railways (a)	35,969	37,829	37,572	37,763	38,084
Harbors, jetties and lights ..	5,024	6,131	6,126	6,195	6,676
Sewers	4,810	5,398	5,742	6,705	7,201
Waterworks and water conservation	9,810	11,178	11,973	13,368	15,116
Irrigation and drainage	797	850	840	861	1,002
Produce stores	598	438	554	505	477
Forestry (b)	720	1,080	1,080	1,200	1,440
Total	57,727	62,904	63,887	66,597	69,996

(a) Includes grant from Treasury each year—\$7,800,000 in 1962-63, \$8,000,000 in 1966-67.

(b) Contribution to Consolidated Revenue from surplus earned. Figures for the other undertakings are total revenue.

Payments from Consolidated Revenue Account

Although public moneys from the Consolidated Revenue Account are expended by various Government departments the following table shows expenditure on a functional basis:

Consolidated Revenue Account: Expenditure
Classified According to Functions, South Australia

Function	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Legislation and general administration	12,282	12,049	12,471	13,956	15,529
Law, order, public safety ..	8,687	9,326	10,236	11,018	12,594
Regulation of trade and industry	589	669	751	757	816
Education	38,797	43,898	49,438	55,636	58,340
Encouragement of science, art and research	861	1,030	1,165	1,221	1,275
Promotion of public health and recreation	20,869	23,807	26,715	30,354	32,295
Social amelioration	3,075	3,380	3,667	4,097	4,584
War obligations	866	951	848	535	486
Local government	52	42	200	203	54
Development and maintenance of State resources other than business undertakings	14,606	15,926	17,344	17,736	18,148
Business undertakings	48,906	48,982	50,460	52,559	54,919
Public debt charges:					
Interest (and exchange)	37,794	39,988	43,099	46,495	49,884
Sinking fund	7,204	7,707	8,409	9,084	9,793
Total	194,589	207,755	224,803	243,650	258,717
	\$				
Per head of population	194.88	203.00	213.67	225.21	234.35

Public debt charges were 23.12 per cent of consolidated revenue expenditure in 1962-63 and 23.07 per cent in 1966-67. Apart from public debt charges and expenditure by business undertakings, expenditure on education, 19.94 per cent in 1962-63 and 22.55 per cent in 1966-67, exceeded that on other individual functions.

Expenditure on public health was 10.72 per cent of the total in 1962-63 and 12.48 per cent in 1966-67.

If the public debt charges are allocated to the various functions and all receipts, with the exception of revenue from taxation and Commonwealth grants, are offset against the payments for the corresponding functions, a table showing the 'net cost of functions' can be prepared. The following is such a table for the financial years 1965-66 and 1966-67, showing also the net cost per head of population.

Total net cost of functions increased in 1966-67 from the total in 1965-66 by \$6,356,000 (or 4.8 per cent). Net cost of education represented 43.0 per cent of the total net cost in 1966-67, an increase of approximately \$5,121,000 on expenditure on education in 1965-66. Total net cost *per capita* rose by \$3.32

Consolidated Revenue Account: Expenditure
Net Cost of Functions, South Australia

Function	1965-66		1966-67	
	Net Cost	Per Capita	Net Cost	Per Capita
	\$'000	\$	\$'000	\$
Legislative and general administration ..	10,520	9.72	12,118	10.98
Law, order, and public safety	8,456	7.82	9,627	8.72
Regulation of trade and industry	435	0.40	457	0.41
Education	54,205	50.10	59,326	53.74
Encouragement of science, art and research	1,222	1.13	1,292	1.17
Promotion of public health and recreation	26,261	24.27	24,824	22.49
Social amelioration	3,661	3.38	4,107	3.72
War obligations	592	0.55	491	0.44
Local government	215	0.20	85	0.08
Development and maintenance of State resources other than business undertakings	15,161	14.01	14,081	12.75
Business undertakings	10,364	9.58	11,058	10.02
Revenue deficiencies	469	0.43	451	0.41
Total	131,561	121.61	137,917	124.93

Business Undertakings, Expenditure

Further details of the expenditure of business undertakings for the years 1962-63 to 1966-67 are given in the table below.

Business Undertakings: Expenditure, South Australia

Function	1962-63	1963-64	1964-65	1965-66	1966-67
			\$'000		
Railways	35,978	36,078	36,786	37,337	39,112
Navigation, harbors, lights	2,885	3,090	3,256	3,294	3,451
Water supply, sewerage, irrigation, and drainage..	9,519	9,351	9,912	11,416	11,777
Produce Department	523	463	505	512	580
Total	48,906	48,982	50,460	52,559	54,919

TRUST FUNDS ACCOUNTS

These are principally moneys lodged with the Treasurer by public authorities and other bodies on current account; funds held for specific purposes pursuant to legislation, not necessarily expendable in any one year; contractors' and statutory deposits and unclaimed moneys. At 30 June 1967 they represented slightly more than 10 per cent of indebtedness of the South Australian Government. Total balances at 30 June 1965, 1966 and 1967, with many of the larger balances itemised, are shown in the following table.

Trust Funds Accounts, South Australia

Balances at 30 June

Particulars	1965	1966	1967
		\$'000	
Commissioners of Charitable Funds	525	1,128	1,244
Electricity Trust of South Australia	1,349	1,117	900
Fire Brigades Board	247	389	330
Legacy Club	225	126	33
Municipal Tramways Trust	550	550	550
Police Pensions Fund	347	200	157
Royal Adelaide Hospital Endowment Fund	716	741	778
South Australian Housing Trust Fund	795	1,221	851
South Australian Superannuation Fund	359	680	771
University of Adelaide	2,565	2,746	2,548
Sailors and Soldiers Distress Fund	157	129	112
Service Welfare Fund; 1939-45 War	173	163	145
Other	1,480	1,477	2,218
Balances on which interest is paid	9,488	10,667	10,637
Agricultural Research and Service Grants	171	192	193
Crown Solicitors Trust Account	145	323	576
Leigh Creek Coal Fund	872	1,021	631
Public Trustee; Common Fund Reserve	184	188	180
Commonwealth Grant towards Science Laboratories and Technical Training	778	139	50
Other	839	454	789
Balances on which no interest is paid	2,989	2,317	2,419
Total Trust Funds	12,477	12,985	13,056

SPECIAL COMMONWEALTH ADVANCES

Pursuant to Commonwealth-State agreements, the Commonwealth has made sums available to the State for the erection of housing by State instrumentalities, and for loans to home builders, and also for railway standardisation purposes. These advances are not subject to sinking fund conditions but are repayable to the Commonwealth by annual instalments in terms of the respective agreements.

Advances received from the Commonwealth pursuant to the Housing Agreement totalled \$20,750,000 for 1966-67. Of these advances \$10,000,000 was allocated by the Treasurer to the South Australian Housing Trust, and \$10,750,000 to the Home Builders Fund. Liability of the State to the Commonwealth on this account at 30 June 1967 was \$182,132,000.

During 1966-67 funds provided by the Commonwealth for railway standardisation works totalled \$6,929,000. The State's liability to the Commonwealth at 30 June 1967, after allowing for repayment of \$900,000 was \$8,388,000.

Under the *Railway Equipment Agreement (South Australia) Act 1961*, the Commonwealth agreed to make available to the State, funds up to a maximum of \$2,650,000 for the purposes of providing diesel locomotives and ore wagons for the Port Pirie-Broken Hill railway. Thirty per cent of the total amount advanced is repayable over a 50-year period, together with interest thereon. The State's liability to the Commonwealth at 30 June 1967 was \$727,000.

LOAN FUND ACCOUNTS

These accounts record the capitalised expenditure on construction or acquisition of assets such as schools, reservoirs, hospitals, forests, plant and stores, and advances to public authorities and for primary production and housing; in 1966-

67 capital grants for University and Advanced Education buildings and for non-Government hospital buildings were also made from loan funds.

State borrowing programmes are subject to consideration and agreement at meetings of the Australian Loan Council. Moneys are raised by the sale of Commonwealth Government securities on behalf of the State pursuant to the financial agreement which also provides for the redemption of such securities over specified periods from sinking funds contributed by the State and Commonwealth to the National Debt Commission.

Gross expenditure from these accounts for the years 1962-63 to 1966-67 is shown in the next table.

Loan Fund Accounts: Gross Expenditure, South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Undertakings:					
Railways	4,092	5,028	6,400	5,565	4,815
Harbours and jetties	2,994	2,439	2,142	2,609	2,046
Metropolitan water supply and sewers	12,734	12,695	17,152	16,336	14,572
Country water supply and sewers (a)	10,800	10,725	11,948	10,426	9,404
Water conservation	26	16	(b)	9	88
Irrigation works	400	301	337	437	350
South Eastern drainage ..	932	1,016	902	669	523
Afforestation	1,958	2,090	1,880	2,044	1,900
Produce stores	32	40	132	193	100
Loans and advances:					
Advances to settlers, etc.	676	1,071	1,241	1,403	967
State Bank	400	2,000	1,000	1,000	—
Advances for housing	700	600	600	700	700
Electricity Trust	6,000	5,500	6,000	6,000	6,700
City of Adelaide	—	—	87	340	700
Other loans and advances	211	396	366	319	95
Other purposes:					
Roads and bridges	580	950	—	—	—
Buildings:					
Hospitals	1,457	2,794	5,129	7,314	6,572
Schools	11,910	9,850	11,183	11,759	10,757
Police and courts	1,153	2,220	1,025	909	923
Other	1,258	2,195	4,364	3,965	5,751
River Murray weirs, etc.	120	240	390	644	645
Capital Grants	—	—	—	—	8,802
Mines Department stores, etc.	249	364	295	304	162
Land repurchased for settlement	24	5	1	—	—
Education Department, purchase of buses	263	268	279	281	283
Data processing equipment	—	—	24	554	69
Metropolitan floodwaters, etc.	530	551	596	1,020	511
Other	103	143	124	(c) 966	(c) 1,165
	59,602	63,497	73,597	75,766	78,599
Floating conversion loans:					
Expenses, etc.	79	100	43	192	185
Total	59,681	63,597	73,639	75,958	78,784

(a) Includes Morgan-Whyalla water main.

(b) Less than \$500.

(c) Includes \$791,000 in 1965-66 and \$975,000 in 1966-67 nominal increase in Loan Account occasioned by repatriation of overseas debt.

The following table shows expenditure from loan fund accounts for the year ended 30 June 1967 together with credits and net balances. The sinking fund credits represent securities redeemed and cancelled by the National Debt Commission on account of South Australia.

Loan Fund Accounts

Gross Expenditure, Credits, and Net Balances, South Australia, 1966-67

Particulars	Expenditure	Credits			Net Aggregate Balance at 30 June
		Repay-ments, etc.	Sinking Fund	Total	
			\$'000		
Undertakings :					
Railways	4,815	182	1,655	1,836	127,519
Harbors and jetties	2,046	434	524	958	43,727
Metropolitan water supply and sewers	14,572	1,817	1,152	2,968	167,418
Country water supply and sewers (a)	9,404	1,260	1,081	2,342	117,865
Water conservation	88	(b)	35	35	2,071
Irrigation works	350	72	201	273	11,100
South-Eastern drainage	523	10	19	29	14,143
Afforestation	1,900	1,056	—	1,056	13,721
Produce stores	100	1	38	39	1,476
Loans and advances :					
Soldier settlement	—	80	100	180	6,302
Advances to settlers, etc.	967	764	—	764	8,081
State Bank	—	6	58	64	13,920
Advances for housing	700	1,742	287	2,029	82,276
Tramways Trust	—	44	905	950	9,268
Abattoirs Board	—	5	22	27	1,563
Electricity Trust	6,700	335	707	1,041	130,659
City of Adelaide	700	—	—	—	1,127
Other loans and advances	95	19	16	35	2,048
Other purposes :					
Roads and bridges	—	—	109	109	8,700
Government Buildings ;					
Hospitals	6,572	241	463	704	55,031
Schools	10,757	115	1,222	1,337	110,525
Police and courts	923	6	65	71	11,296
Other	5,751	49	212	261	26,768
River Murray weirs, etc.	645	—	—	—	12,604
Capital grants	8,802	1,900	140	2,040	6,762
Mines Department stores, etc.	162	91	156	246	1,585
Land repurchased for settlement	—	68	—	68	1,494
Education Department, purchase of buses	283	—	223	223	1,135
Data processing equipment ...	69	5	108	113	535
Metropolitan floodwaters, etc. .	511	20	—	20	3,936
Leigh Creek coalfield	—	600	74	674	6,971
Other	190	51	66	117	3,170
	77,624	10,971	9,637	20,608	1,004,798
Repatriation of overseas loans ...	975	—	975	975	—
Floating conversion loans :					
Expenses, etc.	185	185	—	185	—
Revenue deficits funded	—	—	344	344	9,468
Total	78,784	11,156	10,956	22,112	1,014,266

(a) Includes Morgan-Whyalla water main.

(b) Less than \$500.

LOAN RAISINGS AND THE PUBLIC DEBT

State Debts Taken Over by Commonwealth

Under the financial agreement the Commonwealth took over on 1 July 1929 State debts existing on 30 June 1927; and all debts of each State existing on 1 July 1929 for money borrowed by that State are deemed by the agreement to be money borrowed by the Commonwealth for and on behalf of the State; and in respect of these debts, the Commonwealth assumed the liabilities of the States.

For a period of fifty-eight years from 1 July 1927 the Commonwealth agreed to contribute the sum of \$15,169,824 each year towards the interest payable on the State debts (\$1,407,632 to South Australia). The balance of the interest payable on State debts was to be paid to the Commonwealth by the States.

Australian Loan Council

One of the main features of the financial agreement was the establishment of an Australian Loan Council which was set up to co-ordinate the borrowings of the Commonwealth and the States. It consists of the Prime Minister of the Commonwealth, or another Minister nominated by him in writing, as chairman, and the State Premiers, or Ministers nominated by them in writing. Each year, the Loan Council examines the loan programmes of the Commonwealth and the States and determines the total amount to be borrowed during the year. Borrowings by the Commonwealth for defence purposes are not subject to decisions of the Loan Council.

Subject to the decisions of the Loan Council the Commonwealth arranges for all borrowings for or on behalf of itself or any State, and for all conversions, renewals, redemptions, and consolidations of the securities issued on behalf of the Commonwealth and of the States.

If the Loan Council unanimously decides, however, a State may borrow outside Australia in its own name, and may issue securities for the amount so borrowed. The Commonwealth then guarantees that the State will fulfil its obligations to bond-holders in respect of the money so borrowed, and the money is deemed to be borrowed by the Commonwealth for and on behalf of the State.

Subject to any maximum limits decided upon by the Loan Council for interest, brokerage, discount, and other charges, the Commonwealth or any State may borrow within its own territory, for any purpose, money from any authorities, bodies, funds, or institutions (including savings banks) constituted or established under Commonwealth or State law or practice; borrow from the public by means of counter sales of securities; and use any available public moneys.

However, any securities issued for money so borrowed or used must be Commonwealth securities on terms approved by the Loan Council.

Since 1936 the Australian Loan Council has, by the consent of its members, exercised substantial control over the limits of borrowing by local government and semi-government authorities.

National Debt Commission

Sinking funds established by the financial agreement between the Commonwealth and the States under the provisions of the *National Debt Sinking Fund Act* 1923-1959, were designed to redeem the States' debt over differing periods of years and with contributions by the Commonwealth and States varying in accordance with the differing natures of the indebtedness.

The contributions of the Commonwealth and the States in respect of the States' debts are not accumulated but, subject to the financial agreement, are applied by the Commission to the redemption of the public debts of the States, and the

repurchase of securities issued in respect thereof. Under the provisions of the financial agreement, repurchased or redeemed securities must be cancelled, and the debts of the States are reduced accordingly.

For further information on the detailed operations of the National Debt Sinking Fund see the Official Year Book of the Commonwealth of Australia, particularly No. 37.

Contributions by the Commonwealth on behalf of South Australia, and by the State Government to the National Debt Sinking Fund, and redemptions and repurchases of securities by payment from the fund for the financial years 1965-66 and 1966-67 are given in the following tables. Corresponding figures for Australia are also stated.

National Debt Sinking Fund

Particulars	1965-66		1966-67	
	South Australia	Australia	South Australia	Australia
Receipts:	\$'000			
Contributions by Commonwealth	2,335	17,761	2,482	18,951
Contributions by State (a)	2,589	19,810	2,735	20,999
4½ per cent contributions by State on cancelled debt	5,402	41,441	5,834	44,782
4 per cent contributions on funded deficits	55	2,493	56	2,443
Contributions by State on loans for wasting assets	180	640	195	643
Interest received from State in respect of repurchased securities to date of cancellation of securities	12	106	17	113
Interest on the temporary investments of State funds during the year	4	30	Dr. 4	Dr. 46
Special contributions in respect of loans converted at a discount	20	222	20	220
Total receipts	10,597	82,503	11,335	88,105
Expenditure:				
Redemptions and repurchases;				
In Australia	7,711	60,861	8,666	59,451
In London	1,793	11,685	1,231	16,545
In New York	1,332	11,775	1,151	10,441
In Canada	105	782	93	680
Total expenditure	10,941	85,104	11,140	87,118

(a) Includes \$1.50% contributions on Commonwealth Government debentures issued on behalf of the States.

The Loan Fund

A summary of loan raisings to finance State Government loan works in South Australia during 1966-67 is given by the following statement. The total face value of new loans raised less redemptions, cancellations, and conversions shows the movement in the public debt.

The Loan Fund

(1) Cash operations:	\$'000	\$'000
Deficit at 30 June 1966		2,465
Receipts:		
New loan raising		67,680
Repayments		11,156
		76,370
Payments		77,576
		1,206
(2) Movement in public debt:		
The public debt at 30 June 1966		955,128
Add: Face value of new loans raised:		
For cash		67,912
For conversion		85,801
		1,108,841
Less: Face value of securities redeemed and cancelled by National Debt Commission	9,981	
Loans converted	85,801	95,781
The public debt at 30 June 1967		1,013,060

The Public Debt

The following table gives details of the public debt and total indebtedness of South Australia at 30 June 1967 and for nine previous years. A further table shows the annual interest payable on the public debt for these years and the average rate of interest.

Public Debt and Total Indebtedness, South Australia

At 30 June

Year	Public Debt—Being Interest Bearing Securities Outstanding		Other Interest Bearing Indebted- ness (a)	Non- Interest Bearing Indebted- ness (a)	Total Indebtedness	
	Total	Per Head			Total	Per Head
	\$'000	\$	\$'000	\$'000	\$'000	\$
1958.....	593,628	661.90	56,085	1,418	645,131	719.40
1959.....	635,404	690.00	58,566	1,872	695,842	755.70
1960.....	678,210	717.50	69,201	2,327	749,739	793.20
1961.....	722,038	743.20	82,253	2,291	806,582	830.30
1962.....	763,399	773.10	98,841	2,166	864,405	875.40
1963.....	807,044	798.50	120,954	2,232	930,230	920.30
1964.....	853,555	822.30	136,236	2,685	992,477	956.10
1965.....	902,823	845.70	157,484	2,989	1,063,297	996.00
1966.....	955,128	872.30	180,466	2,317	1,137,911	1,039.20
1967.....	1,013,060	911.50	201,885	2,419	1,217,363	1,095.30

(a) Gross less securities held on these accounts.

Public Debt: Interest and Average Rate, South Australia

At 30 June

Year	Annual Interest on Debt in (a)				Average Rate Per Cent (a)			
	Australia	London	Other	Total	Australia	London	Other	Total
	\$'000	\$'000	\$'000	\$'000	\$	\$	\$	\$
1958....	20,990	2,004	396	23,390	4.02	3.22	4.33	3.94
1959....	22,887	2,214	493	25,594	4.10	3.36	4.51	4.03
1960....	25,223	2,185	582	27,991	4.20	3.36	4.69	4.13
1961....	27,415	2,204	850	30,468	4.28	3.42	4.91	4.22
1962....	30,374	2,181	975	33,530	4.47	3.41	5.03	4.39
1963....	31,672	2,347	1,231	35,249	4.43	3.50	5.13	4.37
1964....	33,612	2,534	1,193	37,339	4.42	3.61	5.13	4.38
1965....	37,088	2,530	1,137	40,756	4.57	3.65	5.13	4.51
1966....	40,928	2,360	1,267	44,555	4.73	3.65	5.21	4.66
1967....	44,808	2,323	1,176	48,307	4.83	3.66	5.27	4.77

(a) Based on the Debt converted at rates current at the time of the several raisings, and nominal rate of interest payable at 30 June taking no account of exchange.

Rates of interest and years of maturity on the public debt of South Australia are shown below.

Public Debt According to Rate of Interest, South Australia

At 30 June

Nominal Rate Per Cent	1963	1964	1965	1966	1967		
					Total	Redeemable In	
						Australia	Other (a)
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
6	1,322	1,322	1,322	1,322	1,322	—	1,322
5.75	2,028	1,956	1,903	5,283	5,180	—	5,180
5.5	14,586	18,164	17,898	17,285	16,883	—	16,883
5.375	35,172	35,172	35,172	35,172	35,172	35,172	—
5.25	20,908	20,634	47,298	105,188	150,001	146,350	3,651
5	197,822	197,648	247,879	342,316	397,111	393,634	3,477
4.75	77,914	67,132	78,988	78,888	67,159	65,319	1,840
4.625	—	7,458	7,458	7,458	7,458	7,458	—
4.5	147,210	168,836	171,263	154,644	172,114	170,260	1,854
4.25	85,346	92,892	96,169	63,101	41,143	41,143	—
4	36,096	36,096	36,096	9,794	9,604	197	9,407
3.75	16,183	42,438	42,423	26,592	300	—	300
3.5	876	864	852	844	—	—	—
3.4875	2	2	2	2	2	2	—
3.25	23,151	22,748	21,889	21,049	20,149	—	20,149
3.125	78,451	62,358	9,842	—	—	—	—
3	16,230	16,230	16,130	12,453	12,446	246	12,200
2.75	3,769	3,768	3,769	3,709	3,709	—	3,709
2.5	5,872	5,872	5,872	5,872	5,872	—	5,872
2.325	690	690	656	652	623	623	—
1.5	5,872	5,702	5,530	5,355	5,177	5,177	—
1	6,980	6,754	6,516	6,268	6,009	6,009	—
Special bonds (c)	30,563	38,822	47,900	51,882	55,627	55,627	—
Total	807,044	853,556	902,823	955,128	1,013,060	927,218	85,842

(a) \$63,534,000 redeemable in U.K., \$18,183,000 in U.S.A., \$1,685,000 in Canada, \$1,402,000 in Switzerland and \$1,039,000 in Netherlands. Converted at rates current at the time of the several raisings. Debt redeemable converted at rates of exchange obtaining at 30 June, 1967, totalled \$100,306,000: the resulting contingent liability of \$414,464,000 has since been reduced by reason of U.K. Devaluation.

(b) Commonwealth Debentures.

(c) Rate of interest varies from 4 to 5½% according to date of maturity.

Public Debt According to Year of Maturity, South Australia

At 30 June

Year of Maturity	1963	1964	1965	1966	1967		
					Total	Redeemable in	
						Australia	Other (a)
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1963-64	47,029	—	—	—	—	—	—
1964-65	84,497	84,498	—	—	—	—	—
1965-66	105,510	105,510	105,441	—	—	—	—
1966-67	36,947	72,836	85,157	85,149	—	—	—
1967-68	58,980	58,980	74,076	102,072	105,014	92,323	12,691
1968-69	59,080	59,080	59,080	68,011	72,185	72,185	—
1969-70	35,800	35,376	34,501	59,663	128,224	14,474	13,750
1970-71	32,955	32,930	32,893	32,796	40,365	35,791	4,574
1971-72	29,215	29,174	31,591	31,472	40,092	35,483	4,609
1972-73	53,523	53,420	53,283	53,183	63,062	61,222	1,840
1973-74	353	18,302	18,302	18,302	32,227	32,227	—
1974-75	27,874	33,532	54,466	59,218	59,218	46,648	12,570
1975-76	25,527	25,528	25,527	52,451	57,021	54,963	2,058
1976-77	402	402	402	402	31,171	31,171	—
1977-78	3,492	3,468	3,467	3,467	3,467	421	3,047
1978-79	6,709	6,578	6,429	6,278	6,139	439	5,700
1979-80	32,212	32,074	31,916	31,764	31,609	29,783	1,825
1980-85	89,313	100,164	175,714	181,633	180,966	166,078	14,889
1985-90	37,295	53,222	53,156	107,980	129,158	125,662	3,496
1990-95	3,822	3,718	3,613	3,506	3,397	3,397	—
1995-2000	—	—	—	—	—	—	—
2000-2005	—	—	—	—	23,882	23,882	—
Variable (b)	30,563	38,822	47,900	51,882	—	—	—
Optional	5,745	5,744	5,711	5,699	5,663	868	4,794
Indefinite	197	197	197	197	197	197	—
Total	807,044	853,556	902,823	955,128	1,013,060	927,218	85,842

(a) See footnote preceding table.

(b) From 1966-67 onwards, Special Bonds have been allocated to the latest year in which redemption can be made.

DEPOSIT AND SUSPENSE ACCOUNTS

Reference to these accounts was made in Part 12.1. Although the main function of many of them is to facilitate the allocation of charges and recoups to various headings of revenue and expenditure within the budget sector, some contain, as already noted, substantial transactions which are not reflected in the Budget.

Deposit and Suspense accounts showed a credit balance of \$15,115,000 at 30 June 1967.

12.4 SEMI-GOVERNMENT FINANCE

REVENUE AND EXPENDITURE

Many semi-governmental authorities produce annual reports reviewing their activities and most of them publish annual financial statements. In South Australia there is no consolidated tabulation of statistics covering revenue and expenditure of semi-governmental authorities although a recent extension of public finance work is directed to this end.

Business Undertakings

Some semi-governmental authorities are regarded as business undertakings because they seek to cover a substantial part of their costs by selling goods and services to the public. The following tables show revenue and expenditure of some of those business undertakings for the financial years 1962-63 to 1966-67.

The Electricity Trust of South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
			\$'000		
Funds employed	198,666	211,262	224,931	237,946	252,444
Income	36,602	40,066	44,046	48,792	51,156
Operating expenses	27,824	29,903	32,877	37,008	38,895
Surplus on operating	8,778	10,163	11,169	11,784	12,261
Debenture interest	8,504	9,263	10,059	10,830	11,742
Net surplus	274	900	1,110	955	518

The Municipal Tramways Trust

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
			\$'000		
Funds employed (Net)	6,500	6,180	5,946	5,548	5,268
Income	5,436	5,473	5,899	6,049	6,270
Operating expenses	5,166	5,194	5,487	5,806	5,947
Surplus on operating	270	279	411	243	323
Interest charges	535	516	518	505	474
Deficit	265	237	108	261	151
Grant from S.A. Government	27	60	20	20	20
Net deficiency	238	177	87	241	131

The Leigh Creek Coal Fund

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
			\$'000		
Funds employed	11,884	15,664	15,796	16,190	15,870
Income	4,969	5,365	5,740	6,103	5,716
Operating expenses	4,677	5,076	5,493	5,883	5,627
Interest	219	208	151	121	89
Surplus	74	81	96	99	—

The South Australian Housing Trust

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
			\$'000		
Funds employed	160,800	174,030	187,789	202,686	216,874
Income	9,132	10,410	11,279	12,502	13,423
Expenditure	4,053	4,501	4,937	5,513	5,779
Interest on loan capital	4,565	5,068	5,428	5,847	6,508
Surplus	514	841	914	1,142	1,136

The State Bank of South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
			\$'000		
Funds employed	40,680	52,676	64,250	75,855	86,344
Income	3,336	3,884	4,640	5,452	6,274
Management expenses, etc.	916	1,038	1,095	1,181	1,343
Interest on customers' deposits	484	458	506	678	741
Interest on advances from the Treasurer of S.A.	1,486	1,898	2,402	2,919	3,444
Net profit	450	490	638	674	747

The Savings Bank of South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
			\$'000		
Funds employed (a)	300,946	328,442	350,073	370,863	391,894
Income	13,354	14,194	15,924	17,336	18,574
Management expenses, etc.	2,858	3,386	3,669	4,244	4,853
Interest on customers' deposits	9,496	9,716	10,672	11,975	12,672
Net profit	1,000	1,092	1,583	1,117	1,049

(a) Includes current liabilities of which depositors' balances are the principal component.

GRANTS FROM STATE GOVERNMENT

The following table shows grants to a number of semi-government authorities during each of the five years ended 30 June 1967. Grants from Consolidated Revenue and from Loan Fund have been consolidated and the figures represent actual amounts paid to authorities, free of all duplication. Payments for goods and services supplied by semi-government business undertakings are not included in the table. Repayable advances from Loan Fund are also excluded.

Semi-Government Authorities: Grants From State Government

Name	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Adelaide Children's Hospital (a)	2,318	1,970	1,874	1,790	2,458
Adelaide and Flinders Universities (b)	6,198	6,988	9,026	10,799	10,621
Artificial Breeding Board ..	70	38	53	38	—
Electricity Trust of South Australia	200	170	499	—	—
Fire Brigades Board	148	152	162	191	204
Home for Incurables (a)	110	310	576	1,001	1,760
Institute of Medical and Veterinary Science	504	574	676	710	875
Municipal Tramways Trust	26	60	20	20	20
National Park Commissioners	60	78	116	119	111
Queen Victoria Maternity Hospital (c)	280	248	823	1,632	1,594
Renmark Irrigation Trust ..	100	300	300	300	3
S.A. Institute of Technology (d)	960	1,330	1,386	1,740	2,921
Waite Agricultural Research Institute	700	824	1,040	1,080	1,064
Total	11,674	13,042	16,551	19,420	21,631

(a) Amounts subsequently recouped to Consolidated Revenue from Hospitals Fund are included.

(b) Includes State Government disbursement of Commonwealth grants except those for Residential Colleges.

(c) Excludes grants for maintenance of X-ray tuberculosis services.

(d) Includes Commonwealth grants.

LOAN RAISINGS AND DEBT OUTSTANDING

Details of semi-government authorities loan raisings and debt outstandings are published in the tables below. These statistics cover loan raisings and debt of public hospitals, abattoirs boards, vermin boards, the Renmark Irrigation Trust, the Enfield General Cemetery Trust, and the Fire Brigades Board, in addition to those business undertakings mentioned above under the heading Revenue and Expenditure.

New loans raised during the year include new loan liabilities incurred during the year, loans raised to repay indebtedness to the Government, and interest capitalised. Loans raised and redeemed within the year, increases in overdrafts, and loans raised for conversion or redemption of existing debts are excluded.

Debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalised, and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more, have also been included. Current liabilities such as interest accrued (but not capitalised), trade creditors, amounts held in trust and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds, less all bank credit balances (including fixed deposits), which do not form part of a sinking fund to repay a loan.

The next two tables show, respectively, new money loan raisings for the year ended 30 June 1965 and debt outstanding as at 30 June 1964 and 1965. A further table shows debt outstanding as at 30 June 1965 according to rate of interest and year of maturity.

**Semi-Government Authorities: New Money Loan Raisings and Funds
Provided for Redemption of Debt, South Australia, 1964-65**

Authority	New Loan Raisings in Australia			Funds for Redemption		
	Government	Public	Total	Government	Public	Total
	\$'000					
Tramways	—	—	—	629	—	629
Electricity Supply	5,300	6,739	12,039	901	43	944
Fire Brigades	—	—	—	—	4	4
Industry Assistance ..	—	—	—	2	—	2
Banking	11,540	—	11,540	935	—	935
Housing	10,000	3,578	13,578	945	110	1,055
Miscellaneous	50	32	82	37	12	49
Total 1964-65..	26,890	10,349	37,239	3,448	170	3,618

**Semi-Government Authorities: Debt Outstanding, South Australia
At 30 June 1964 and 1965**

Authority	Debt in Australia as at					
	30 June 1964			30 June 1965		
	Government	Public	Total	Government	Public	Total
	\$'000					
Tramways	11,265	—	11,265	10,639	—	10,639
Electricity Supply	114,668	81,623	196,291	119,068	88,318	207,386
Fire Brigades	—	63	63	—	59	59
Hospitals	—	16	16	—	48	48
Industry Assistance ..	12	—	12	10	—	10
Banking	47,598	—	47,598	58,472	—	58,472
Housing	139,844	21,836	161,679	148,898	25,303	174,202
Miscellaneous	1,940	100	2,040	1,948	114	2,062
Total debt	315,328	103,638	418,965	339,035	113,843	452,878
	Annual Interest Payable					
	\$'000					
Total interest..	13,740	5,383	19,123	14,960	5,922	20,882

**Semi-Government Authorities: Debt Outstanding According to
Rate of Interest and Year of Maturity, South Australia**

At 30 June 1965

Rate of Interest	Debt	Year of Maturity	Debt
	\$'000		\$'000
No interest	285	Fixed dates :	
Under 3 per cent	104	1965-66	6,024
3 and under 3½ per cent	25,794	1966-67	6,195
3½ and under 4 per cent	27,342	1967-68	9,352
4 and under 4½ per cent	77,592	1968-69	15,513
4½ and under 5 per cent	164,740	1969-70	6,488
5 and under 5½ per cent	124,434	1970-71	6,572
5½ and under 6 per cent	32,560	1971-72	8,016
6 per cent and over	27	1972-73	6,843
Not specified	—	1973-74	6,934
		1974-75	4,293
		1975-76	3,390
		1976-77	2,769
		1977-78	3,276
		1978-79 and onwards	11,611
		Not stated	14,364
		Instalments :	
		Yearly or less	340,992
		Not stated	210
		Net overdraft	36
Total debt	452,878	Total debt	452,878

12.5 LOCAL GOVERNMENT FINANCE

For the purpose of determining the scope of local government finance statistics, a local government authority is defined as:

- (i) An authority set up under a local government Act to carry out the functions of local government in a defined area (known as a municipality, city, corporate town, or district council area) and which is elected by the residents or property owners, or both, in the area.
- (ii) An authority created or acquired by a local government authority (as defined above) or by two or more local government authorities.

REVENUE AND EXPENDITURE

At the beginning of this chapter it was mentioned that the expenditure of moneys by local government bodies was authorised by the Local Government Act, 1934-1967. This authorisation appears in Part XV, sections 287-290, of the Act whilst section 284 sets out the revenue of a council. Section 296 (1) of this part reads as follows:

'On or before the first day of November in every year, the council shall cause to be prepared a statement of and balance-sheet of the accounts of the council for the financial year then last past.'

These statements are the basis of the statistics on receipts and payments of local government authorities published in this section on local government finance.

Late in 1967 regulations were passed which will provide a new format for local government accounting records effective from 1 July 1968. The main conceptual change is the adoption of the accrual method to replace the cash basis of accounting.

Assessments

Assessments for property rating are based upon annual value or land value. Briefly, annual value is based on the estimated gross annual rental at which a ratable property would be let from year to year with an allowance, not exceeding one-fourth, to cover all outgoings. Some councils adopt the valuations of the Engineering and Water Supply Department which are based on annual value (or improved value). The land value (or unimproved value) is adopted from the assessment of land by the Commissioner of Land Tax or a council may make its own assessment. At 30 June 1967, 45 out of the total number of 142 councils based assessments on land value.

Rating of Properties

Under the provisions of the Act, the council may declare a general rate on the property assessed for the financial year ending the thirtieth day of June next after the declaring of the rate. A differential rate may be declared, for any portion of a local government area, if at least three-quarters in number of the whole of the members of the council vote in favour of the declaring of the rate; the mayor shall not be included as one of the members of the whole number.

The Act also provides for 'a particular rate for defraying the expense of watering any public street or road or place'. The council may levy this watering rate without the consent of the ratepayers. However, it needs their consent to levy a special rate 'if the general rate is insufficient for carrying out any purpose by this or any other Act authorised to be carried out by the council'. These and other provisions are contained in Part XII.

Government Grants

Government grants for construction and maintenance of roads are covered by Part XVI of the Act; Sections 299 (1) and (2) are as follows:

299 (1) The Governor may direct that in any financial year there shall be payable out of the Highways Fund established under the Highways Act, 1926-1967, an amount as grants to councils.

(2) Subject to Section 300, the said amount shall be divided among such councils, and in such proportions, as the Governor, on the recommendation of the Director of Local Government Department, may think fit.

Section 300 sets the division of the total grants between metropolitan and non-metropolitan councils at 25 per cent and 75 per cent respectively. Section 300 (a) makes provision for an additional grant for roads to the council of the City of Adelaide.

Revenue Receipts and Payments

The following tables show the receipts and payments of local government authorities: the first table shows detailed particulars for the year 1965-66 and the second contains a summary for the years 1956-57 to 1965-66.

Particulars	Metropolitan (a)	Country	Total
Receipts:		\$'000	
Taxation;			
Rates, including arrears and fines	11,741	8,671	20,412
Licences, dog and other	115	94	209
Public works and services;			
Health activities	100	190	290
Council property		1,483	1,483
Road work;			
Reimbursement from Highways Department	1,040	3,509	4,549
Other	2,584	1,759	4,344
Other	159	202	360
Government grants	498	3,578	4,076
Business undertakings	—	1,852	1,852
Other	280	135	415
Total receipts	16,517	21,473	37,990
Payments:			
Administration	1,963	1,289	3,252
Debt services (including business undertakings);			
Interest	1,255	506	1,761
Principal	1,100	1,372	2,472
Public works and services;			
Roads and bridges	8,172	12,951	21,122
Health services	1,496	1,007	2,503
Street lighting	564	263	827
Council property	2,754	1,371	4,125
Fire brigades	250	270	520
Other	167	317	484
Grants; Charities and other	57	65	121
Business undertakings	—	1,706	1,706
Other	8	6	14
Total payments	17,786	21,123	38,907

Local Government Authorities: Revenue Receipts and Payments South Australia

Year	Revenue Receipts			Revenue Payments			
	Government Grants (a)	Rates	Total (Including Other)	Administration	Roads and Bridges	Health and Sanitary	Total (Including Other)
				\$'000			
1956-57 ..	2,706	9,563	18,436	1,416	11,106	1,402	18,777
1957-58 ..	3,120	10,333	19,721	1,504	11,238	1,405	19,340
1958-59 ..	3,076	11,060	21,080	1,800	12,480	1,588	21,154
1959-60 ..	2,974	11,971	22,535	1,735	13,173	1,791	23,047
1960-61 ..	3,524	13,076	25,034	2,201	(b) 15,561	1,701	25,746
1961-62 ..	2,984	14,887	27,969	2,289	16,856	1,846	28,111
1962-63 ..	3,215	15,943	29,094	2,499	16,355	1,988	28,915
1963-64 ..	4,317	16,968	33,725	2,577	19,823	2,109	33,763
1964-65 ..	3,804	18,625	33,952	2,931	19,403	2,311	34,834
1965-66 ..	4,076	20,621	37,990	3,252	21,122	2,503	38,907

(b) Expenditure on drainage included in 'Other' from 1961-62.

LOAN RAISINGS AND DEBT OUTSTANDING

Local government authorities loan raisings and debts outstanding are shown in the following tables. The definitions of 'new loans raised' and 'debt', given on page 533 under 'Loan Raisings and Debt Outstanding', apply to the statistics in this section also.

The tables given below show new money loan raisings and debt outstanding for the years 1956-57 to 1965-66. A further table shows debt outstanding at 30 June 1966 according to rate of interest.

Local Government Authorities: New Money Loan Raisings and Funds Provided for Redemption of Debt, South Australia

Year	New Loan Raisings in Australia			Funds for Redemption		
	Govt	Public	Total	Govt	Public	Total
	\$'000					
1956-57	481	1,641	2,122	742	(a)532	1,274
1957-58	794	1,854	2,648	906	356	1,262
1958-59	926	1,866	2,792	682	462	1,144
1959-60	662	2,036	2,698	661	511	1,172
1960-61	1,409	2,501	3,910	681	577	1,258
1961-62	831	3,613	4,444	807	643	1,450
1962-63	1,157	3,959	5,116	860	778	1,638
1963-64	1,518	5,118	6,636	917	1,258	2,175
1964-65	726	5,391	6,117	1,038	1,219	2,258
1965-66	1,104	5,029	6,133	(b)1,144	1,331	(b)2,474

(a) Excludes amounts credited to Sinking Funds.

(b) Includes South-Western Suburbs Drainage Scheme.

Local Government Authorities: Debt Outstanding and Annual Interest Payable, South Australia

Year	Debt in Australia			Annual Interest Payable		
	Govt	Public	Total	Govt	Public	Total
	\$'000					
1956-57	2,297	6,353	8,650	38	296	334
1957-58	2,227	7,995	10,222	46	386	432
1958-59	2,632	9,308	11,940	54	460	514
1959-60	2,613	10,767	13,380	58	544	602
1960-61	3,336	12,700	16,036	67	653	720
1961-62	3,365	15,933	19,298	87	837	924
1962-63	3,673	18,953	22,626	85	1,011	1,096
1963-64	4,296	23,226	27,522	99	1,234	1,333
1964-65	4,069	27,235	31,304	103	1,443	1,546
1965-66	(a)6,185	31,160	(a)37,345	(a)256	1,674	(a)1,931

(a) Includes South-Western Suburbs Drainage Scheme.

**Local Government Authorities: Debt Outstanding
According to Rate of Interest and Purpose, South Australia**

At 30 June 1966

Rate of Interest	Debt	Purpose	Debt
	\$'000		\$'000
No Interest	1,220	Light and power	674
Under 3 per cent	—	Water supply, sewerage and drainage (a).....	8,421
3 and under 3½ per cent	198	Roads, streets, bridges and foot- paths	18,778
3½ and under 4 per cent	213	Recreational	2,715
4 and under 4½ per cent	205	Council properties	5,385
4½ and under 5 per cent	2,445	Other (including not stated) ..	1,372
5 and under 5½ per cent (a)	16,446		
5½ and under 6 per cent	15,834		
6 per cent and over.....	208		
Not specified	575		
Total debt	37,345	Total debt	37,345

(a) Includes South-Western Suburbs Drainage Scheme.

LOAN FUND PAYMENTS

The following table shows the principal purposes for which loan funds were expended during recent years.

Local Government Authorities: Loan Fund Payments, South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Roads, bridges, streets, footpaths, drainage and sewerage	2,550	4,259	4,277	3,601	4,162
Council properties	459	328	661	1,285	1,275
Parks, gardens and recreational reserves	335	419	426	678	592
Other (a).....	53	516	200	479	201
Total	3,397	5,521	5,564	6,043	6,230

(a) Includes business undertakings, redemptions and advances.

PART 13

PRIVATE FINANCE

13.1 BANKING AND CURRENCY

BANKING

LEGISLATION

Under Section 51 of the Commonwealth Constitution Act the Commonwealth Parliament has power to legislate with respect to 'Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money'.

The principal Commonwealth Acts at present in force relating to banking are:

- (a) *The Reserve Bank Act 1959-1966*, providing for the constitution and management of the Reserve Bank and the management of the Australian note issue;
- (b) *The Commonwealth Banks Act 1959-1966*, providing for the constitution and management of the Commonwealth Banking Corporation; and
- (c) *The Banking Act 1959-1967*, providing for the regulation of banking and the protection of the currency and public credit of Australia.

The Banking Act 1959-1967 replaced the *Banking Act 1945-1953*. It applies to all banks operating in Australia or its Territories, except State banks trading in their own State. The objects of the Act are (1) to provide a uniform legal framework for regulating the banking system (2) to safeguard depositors from loss (3) to provide for the co-ordination of banking policy under the direction of the Reserve Bank (4) to control the volume of credit in circulation and bank interest rates (5) to mobilise and to provide machinery for the control of foreign exchange and gold reserves of the Australian economy.

An amendment to the Banking Act in 1967 gave bank status to the Australian Resources Development Bank Limited. This corporation which is being formed by the eight major trading banks with the support of the Reserve Bank, is to operate on a commercial basis in the provision of finance for projects of national importance.

State banking legislation relates to the incorporation of banks and the constitution and management of State Banks. South Australian Acts at present in force relating to banking are:

The State Bank Act, 1925-1958 and

The Savings Bank of South Australia Act, 1929-1959.

THE RESERVE BANK

The Reserve Bank of Australia functions as a Central Bank, controls the Australian note issue through the Note Issue Department, provides special banking facilities through the Rural Credits Department, and acts as banker to the Governments of the Commonwealth and some of the States.

Liabilities and assets of each department of the Reserve Bank are shown in the table below.

Reserve Bank of Australia, Liabilities and Assets

At 30 June 1967

Particulars	Central Bank Department	Note Issue Department	Rural Credits Department	Total (a)
LIABILITIES (\$'000)				
Capital	40,000	—	9,428	49,428
Reserve funds	28,830	9,510	6,582	44,922
Development fund	—	—	722	722
Notes on issue	—	930,083	—	930,083
Deposits, bills payable and other:				
Statutory reserve deposits ...	473,772	—	—	473,772
Other trading bank deposits ..	98,920	—	—	98,920
Savings bank deposits	492,500	—	—	492,500
Other	355,288	22,107	344,242	(a) 393,503
Total	1,489,310	961,700	360,974	(a) 2,483,850
ASSETS (\$'000)				
Gold and balances held abroad ..	396,900	394,522	—	791,422
Other overseas securities	168,807	174,783	—	343,591
Australian Government securities	420,649	391,706	—	812,356
All other	502,954	688	360,974	(a) 536,482
Total	1,489,310	961,700	360,974	(a) 2,483,850

(a) Inter-department accounts have been offset in totals.

Further details of the activities of the Reserve Bank are given in the Year Book of the Commonwealth of Australia.

THE COMMONWEALTH BANKING CORPORATION

The Commonwealth Banking Corporation was established under the *Commonwealth Banks Act* 1959 and came into being on 14 January 1960. It is the controlling body for the Commonwealth Trading Bank, the Commonwealth Savings Bank and the Commonwealth Development Bank.

Particulars relating to the Development Bank are given below, while details of the other two banks are included in later sections relating to all trading banks and savings banks.

COMMONWEALTH DEVELOPMENT BANK

The Development Bank is a supplementary source of finance for development and does not compete with conventional lenders, but provides financial help when such help is thought desirable, and finance is not otherwise available on suitable terms. The primary consideration of the bank's operations in deciding whether finance should be made available is the prospects of success and not necessarily the value of security available. In South Australia all the major private banks and the State Bank of South Australia are agents of the Development Bank for the receipt of loan applications.

The capital of the Development Bank consists of the capital of the Mortgage Bank and Industrial Finance Department of the Commonwealth Bank immediately prior to 14 January 1960, \$10 million provided by the Reserve Bank, \$30 million provided by the Commonwealth Government in the 1961-62 and 1963-64 Budgets, and such other sums as are provided by the Commonwealth Development Bank Reserve Fund. The net profits of the bank are paid to this reserve fund.

TRADING BANKS

In this section the term 'Trading Bank' should be interpreted as:

- (1) any bank which makes returns to the Commonwealth Statistician under section 52 of the *Banking Act* 1959-1967 (except the Rural Credits Department of the Reserve Bank, the Commonwealth Development Bank, the Papua and New Guinea Development Bank and the Australian Resources Development Bank Ltd), and
- (2) the Rural Bank of New South Wales (General Bank Department), the State Bank of South Australia, and the Rural Department of the Rural and Industries Bank of Western Australia.

Banks Originating in South Australia

With a subscribed capital of \$500,000 in 50,000 shares of \$10 each, the first trading bank promoted in South Australia was the Bank of Adelaide which was incorporated by an Act of Parliament and assented to on 5 December 1865. The bank formally opened for business on 11 December of the same year. The Bank of Adelaide now has branches in all mainland States.

Pursuant to the State Advances Act of 1895 the State Bank of South Australia was constituted and commenced business in 1896. The original Act directed that advances were to be made on first mortgage to farmers, other primary producers and local government authorities. In 1925 legislation was enacted which enlarged the scope of the activities of the bank by making provision for loans on overdraft and all business of general banking. The State Bank also administers the under-mentioned Acts on behalf of the State:

Advances for Homes Act, 1928-1958.

Advances to Settlers Act, 1930-1958.

Loan to Producers Act, 1927-1962.

Advances for Wire-netting and Vermin Proof Materials under the Vermin Act, 1931-1967.

Loans for Fencing and Water Piping Act, 1938-1952.

Student Hostels (Advances) Act, 1961.

The State Bank of South Australia does not operate branches or agencies outside the State.

Assets

The following table gives some particulars of assets held by trading banks in Australia. The figures quoted are averages of assets at the close of business on each Wednesday in June 1967.

Trading Banks in Australia: Assets, June 1967
Excludes Inter-branch Accounts and Contingencies

Assets	Common- wealth Trading Bank	Private Banks	Other Cheque- paying Banks	Total
	\$'000			
Gold, bullion and Australian notes	29,801	125,861	6,901	162,563
Cash with Reserve Bank	1,013	3,356	5,396	9,765
Australian public securities:				
Commonwealth and State	271,353	818,530	121,745	1,211,629
Local and semi-governmental authorities	15,500	843	3,182	19,524
Statutory Reserve Deposit Account with Reserve Bank	89,932	384,065	1,169	475,166
Loans to authorised dealers in short term money market	11,119	62,383	15,293	88,794
Other loans, advances and bills discounted	544,834	2,636,031	366,911	3,547,775
Bank premises, furniture and sites..	11,788	119,262	19,593	150,643
Other assets	47,932	297,863	19,133	364,927
Total assets	1,023,272	4,448,194	559,323	6,030,786

Branches and Agencies

Of the fifteen trading banks which operate in Australia, the nine banks listed below conduct business in South Australia:

Government banks:

Commonwealth Trading Bank

State Bank of South Australia

Private banks:

Australia and New Zealand Bank Ltd

Bank of Adelaide

Bank of New South Wales

Commercial Bank of Australia Ltd

Commercial Banking Co. of Sydney Ltd

English, Scottish and Australian Bank Ltd

National Bank of Australasia Ltd

At 30 June 1967 there were 437 branches and 284 agencies in South Australia, compared with Australian totals of 4,602 branches and 1,653 agencies.

The following table shows that in recent years there has been a considerable expansion in the number of metropolitan branches, but virtually no change in the number of country branches.

Trading Bank Branches and Agencies, South Australia

At 30 June

Bank	Branches					Agencies
	1963	1964	1965	1966	1967	1967
Commonwealth Trading Bank ..	37	37	42	45	45	31
State Bank of South Australia ...	35	35	35	35	35	15
Private banks	318	331	344	353	357	238
Total—Metropolitan area	167	180	189	203	208	119
Country	223	223	232	230	229	165
Total State	390	403	421	433	437	284

Deposits, Advances, Etc.

Deposits not bearing interest are on current account and may be withdrawn on demand. Deposits bearing interest include some deposits on current account, but most are deposits for fixed terms—often for 3, 12, 18 or 24 months. The minimum term for fixed deposits was reduced from 3 months to 30 days for large amounts, following an announcement to this effect from the Reserve Bank on 7 April 1964.

Deposits not bearing interest, as a proportion of total deposits, reached a low point of less than 24 per cent in 1933 and rose to a peak of more than 74 per cent in 1953, from which time there has been a relative decline to the 52.8 per cent shown for 1967.

Advances exceeded deposits in two years during the 1930s but conditions during and immediately following the 1939-45 War were such that advances declined from an earlier average of approximately 70 per cent of deposits to only 29 per cent in 1949. Since then the proportion has risen fairly steadily to 77.3 per cent in 1967 when the advances of \$292 million were more than seven times the 1949 figure.

Trading Banks: Average Weekly Deposits and Advances, South Australia

June Quarter 1963 to 1967

June Quarter	Deposits			Loans, Advances, Etc. (a)	Proportion to Total Deposits	
	Bearing Interest	Not Bearing Interest	Total		Deposits Not Bearing Interest	Loans, Advances, Etc. (a)
	\$'000	\$'000	\$'000	\$'000	%	%
1963....	118,766	172,127	290,893	181,162	59.2	62.3
1964....	137,120	191,365	328,485	199,816	58.3	60.8
1965....	162,021	190,391	352,411	239,123	54.0	67.9
1966....	175,058	196,305	371,362	271,132	52.9	73.0
1967....	178,949	199,453	378,401	292,328	52.7	77.3

(a) Excludes loans to authorised dealers in the short-term money market. Includes bills discounted.

Separate details for 1967 for each of the Government banks and for all private banks are as follows:

Trading Banks: Deposits and Advances, South Australia

June Quarter 1967

Bank	Deposits			Loans, Advances, Etc. (a)
	Bearing Interest	Not Bearing Interest	Total	
	\$'000			
Commonwealth Trading Bank	19,756	21,016	40,771	30,784
State Bank of South Australia	18,060	20,121	38,181	102,708
Private trading banks	141,134	158,317	299,450	158,836
Total	178,949	199,453	378,401	292,328

(a) Excludes loans to authorised dealers in the short-term money market. Includes bills discounted.

The following table relates to trading bank advances outstanding for all banks in South Australia and the Northern Territory except the State Bank of South Australia. Advances are classified according to type of borrower in July of each year from 1963 to 1967.

Trading Banks^(a), South Australia and Northern Territory*Advances to Resident Borrowers^(b) by Type of Borrower**At Second Wednesday in July*

Classification	1963	1964	1965	1966	1967
	\$m				
Business advances:					
Agriculture, grazing and dairying;					
Mainly sheep grazing	16.4	17.8	19.8	20.1	22.7
Mainly wheat growing	7.6	8.5	10.3	13.8	16.6
Mainly dairying and pig raising	3.6	3.7	3.8	4.8	4.5
Other	9.4	10.3	11.9	13.4	16.0
Total agriculture, etc.	37.0	40.4	45.8	(c) 52.0	(c) 59.8
Manufacturing	18.5	19.0	29.2	34.4	30.8
Transport, storage and communications	1.9	2.4	2.8	3.4	5.0
Finance;					
Building and housing societies	0.6	0.2	0.6	0.8	0.8
Pastoral finance companies	1.0	1.7	1.1	6.4	2.3
Hire-purchase and other finance companies	1.6	2.7	2.6	2.3	1.9
Other	1.2	2.1	1.6	1.5	2.4
Total finance	4.4	6.7	5.9	11.1	7.4
Commerce;					
Retail trade	16.4	16.2	17.2	19.4	19.5
Wholesale trade (d)	15.7	17.7	21.9	21.1	18.9
Total commerce	32.1	33.8	39.0	40.5	38.4
Building and construction	4.3	4.7	4.6	4.9	6.2
Other business	9.7	11.2	12.1	13.7	17.3
Unclassified	4.6	4.3	3.3	2.5	2.6
Total business advances	112.4	122.6	142.8	162.4	167.6
Distribution of business advances:					
To companies	60.5	67.1	82.2	90.4	90.3
Other	51.9	55.5	60.6	72.0	77.3
Advances to public authorities	0.5	0.4	0.7	0.8	1.0
Personal advances:					
Building or purchasing own home	11.0	11.5	12.8	13.5	15.4
Other	10.0	11.6	12.7	14.1	17.1
Total personal advances	21.0	23.1	25.4	27.6	32.5
Advances to non-profit organisations	1.8	2.0	1.9	2.4	2.7
Total advances to resident borrowers	135.6	148.1	170.9	193.2	203.8

(a) Covers advances by the Commonwealth Trading Bank and all private trading banks, but excludes advances by the State Bank of South Australia.

(b) 'Resident borrowers' include institutions carrying on business, and individuals permanently residing in Australia or Papua-New Guinea.

(c) Includes farm development loan component.

(d) Includes temporary advances to woolbuyers.

Interest Rates

The following table sets out interest rates on fixed deposits and maximum interest rates on overdrafts applying in South Australia at 30 June each year from 1963 to 1967.

Trading Banks: Interest Rates, South Australia

At 30 June	Fixed Deposits					Overdrafts (Maximum Rate)
	30 days, less than 3 months	3 months, less than 12 months	12 months to 15 months	12 months to 18 months	Over 18 months, up to 24 months	
	Per Cent per Annum					
1963....	(a)	3½	3½	(a)	(a)	6½
1964....	(b) 3½	3½	4	(a)	(a)	7
1965....	(b) 4½	4½	(a)	4½	4½	7½
1966....	(b) 4½	4½	(a)	4½	4½	7½
1967....	(b) 4	4	(a)	4½	4½	7½

(a) Not applicable.

(b) On deposits of \$100,000 or more only.

Debits to Customers' Accounts

Debits to customers' accounts generally represent the total of all cheques drawn by customers of the banks. The average weekly debits to customers' accounts of all cheque-paying banks, including the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank, in South Australia in recent years was as follows:

	\$'000
1962-63	131,791
1963-64	154,777
1964-65	170,254
1965-66	172,615
1966-67	183,933

These figures are the averages of debits during weeks ending on Wednesdays.

SAVINGS BANKS

Savings Bank of South Australia

The Savings Bank of South Australia commenced operations on 11 March 1848 following the enactment of an ordinance in 1847. In 1848 the bank had 214 depositors, with depositors' funds amounting to \$10,626. By 1875 the number of depositors had grown to 22,662, depositors' balances amounted to \$1,633,654 and agencies had been established in thirty townships throughout the State.

The Savings Bank of South Australia does not operate branches in other Australian States, although it has appointed agents to act for it in other States and in the United Kingdom. At 30 June 1967 there were 130 branches and 790 agencies in South Australia and in addition there were 816 school bank agencies.

The total value of depositors' balances first exceeded \$200 million in 1956, and has subsequently increased rapidly to exceed \$362 million by 1967. At 30 June 1967, mortgage loans outstanding totalled almost \$140 million following

record mortgage lending of over \$22 million in 1966-67 which was predominantly to depositors for building or purchasing homes (\$16,959,232) but included also \$2,930,350 for purchase or development of rural properties. Further details of operations in recent years are as follows:

Savings Bank of South Australia, Summary of Business

Year	Operative Accounts (a)	Cash Turn- over (b)	Depositors Balances (a)	Mortgage Loans (a)	Government Securities Held (a)
	No.	\$m	\$'000	\$'000	\$'000
1962-63	847,614	465	279,920	84,972	173,079
1963-64	858,072	537	304,271	96,935	184,178
1964-65	870,983	630	322,841	110,704	195,315
1965-66	884,250	686	343,062	125,833	199,467
1966-67	894,454	728	362,190	139,703	204,875

(a) At end of year, as published in the Bank's Annual Report.

(b) Sum of deposits and withdrawals; includes some duplication from amounts transferred by depositors from one type of account to another.

Development of Savings Banks

Post offices in South Australia acted as agencies for the Savings Bank of South Australia until the establishment of the Commonwealth Bank in 1912 when they switched to act as agencies for this bank.

Savings bank business was conducted entirely by these two government banks until 1956, when the first of the private banks entered the field. At present savings banking facilities in South Australia are provided by the nine banks listed below.

Government:

Commonwealth Savings Bank

Savings Bank of South Australia

Private:

Australia and New Zealand Savings Bank Ltd

Bank of Adelaide Savings Bank Ltd

Bank of New South Wales Savings Bank Ltd

Commercial Savings Bank of Australia Ltd

Commercial Banking Co. Savings Bank Ltd

English, Scottish and Australian Savings Bank Ltd

National Bank Savings Bank Ltd

The prime object of the foundation of savings banks in Australia was the encouragement of thrift, and deposits as small as ten cents are still accepted. Generally, depositors cannot operate on their savings accounts by means of cheques, although most savings banks extend this facility to non-profit organisations such as friendly, co-operative and charitable societies, and in addition the Savings Bank of South Australia provides similar facilities for other depositors.

Savings bank accounts have the advantages that deposits may be withdrawn on demand and that depositors receive interest on their minimum monthly balances. No charge is made by the banks for keeping the accounts.

Assets

Under the provisions of the *Banking Act* 1959-1967 all savings banks, except State banks, which are subject to the Act are required to maintain in prescribed investments an amount that together with cash on hand in Australia is not less than the amount on deposit in Australia with the savings bank. These prescribed investments include deposits with the Reserve Bank, deposits with or loans to other banks, Commonwealth or State securities, loans for housing and loans to authorised dealers in the short-term money market.

A savings bank must hold at least 65 per cent of depositors' funds in cash or approved securities.

Under the Act, a savings bank may not accept deposits from a profit-making body unless it is acting as a trustee for a non-profit-making beneficiary.

Details of assets of all savings banks in Australia at 30 June 1967 are as follows:

Savings Banks: Assets in Australia, 30th June 1967

(Excludes inter-branch accounts)

Assets	Common- wealth Savings Bank	State Savings Banks	Trustee Savings Banks (a)	Private Savings Banks	Total
			\$'000		
Coin, bullion and Australian notes	3,760	6,239	337	2,013	12,349
Deposits with Reserve Bank	243,410	61,829	530	186,725	492,494
Deposits in Australia with trading banks	27,497	78,832	5,803	24,164	136,296
Australian public securities:					
Commonwealth and States . . .	1,172,772	380,231	19,034	612,452	2,184,489
Local and semi-governmental authorities	342,044	409,383	33,239	543,882	1,328,548
Loans, advances and bills dis- counted (b):					
Housing	620,710	439,150	18,046	470,844	1,548,750
Other	121,701	55,937	5,702	38,910	222,250
All other assets	52,727	48,863	5,793	44,783	152,166
Total assets	2,584,621	1,480,464	88,484	1,923,773	6,077,342

(a) Trustee banks do not operate in South Australia.

(b) Excludes loans to authorised dealers on the short-term money market.

Branches and Agencies

The number of branches of the government banks has increased steadily over recent years, whereas the number of branches of private banks increased suddenly during 1961-62 when several banks commenced operations in this State, and has since risen much less rapidly.

Savings Banks: Branches and Agencies, South Australia*At 30 June*

Bank	Branches					Agencies	
	1963	1964	1965	1966	1967	1966	1967
Commonwealth Savings Bank..	61	64	65	68	70	906	902
Savings Bank of South Australia	117	121	123	126	130	780	788
Private banks	318	331	344	353	357	599	563
Total—Metropolitan area	231	248	257	273	289	1,236	1,246
Country	265	268	275	274	268	1,050	1,007
Total State	496	516	532	547	557	2,286	2,253

Deposits

Until 1961, the total of depositors' balances in savings banks per head of population was higher in South Australia than in any other State. Although deposits per head are now higher in Victoria than in South Australia, the figure for this State is still well above the Australian average, as can be seen from the following table.

Savings Banks: Accounts and Deposits, Australia and South Australia

At 30 June	South Australia			Australia		
	Accounts Operative (a)	Deposits	Deposits per Head of Population	Accounts Operative (a)	Deposits	Deposits per Head of Population
	'000	\$m	\$	'000	\$m	\$
1963....	1,104	416.1	412.9	10,323	3,939.7	361.3
1964....	1,181	475.8	459.9	11,051	4,476.2	402.7
1965....	1,254	519.2	488.1	11,769	4,886.6	431.2
1966....	1,319	558.9	512.4	12,469	5,253.7	455.2
1967....	1,371	605.2	546.6	13,133	5,764.7	490.6

(a) Excludes school bank and inoperative accounts.

The Savings Bank of South Australia has always held most of the total of depositors' balances in this State, although its share of total on deposit has dropped from about 75 per cent in 1961 to 60 per cent in 1967. In that time the private banks have increased their share from less than 12 per cent to over 18 per cent.

Savings Bank Deposits, South Australia

At 30 June	Commonwealth Savings Bank	Savings Bank of South Australia	Private Savings Banks	Total
	\$m			
1963.....	92.9	279.9	43.3	416.1
1964.....	105.7	304.3	65.8	475.8
1965.....	115.5	322.8	80.9	519.2
1966.....	122.6	343.1	93.2	558.9
1967.....	132.8	362.2	110.1	605.2

The next table gives an indication of the amount of business conducted by banks during a year. It shows that in each of the last five years, both the amount deposited and the amount withdrawn during the year exceeded the total amount on deposit at the end of the year.

Movements in Savings Bank Deposits, South Australia

Year	Amount on Deposit at Beginning of Year	Deposits during Year (a)	Withdrawals during Year (a)	Interest Added during Year	Increase in Depositors' Balances during Year	Amount on Deposit at End of Year
				\$m		
1962-63	361.9	490.2	448.9	12.9	54.2	416.1
1963-64	416.1	579.6	532.6	12.7	59.7	475.8
1964-65	475.8	671.4	643.3	15.3	43.4	519.2
1965-66	519.2	721.5	699.1	17.2	39.7	558.9
1966-67	558.9	784.7	757.4	19.0	46.3	605.2

(a) Includes inter-branch transfers.

Interest Rates

At 1 August 1968 the interest rate on ordinary accounts varied from 3½ per cent to 3¼ per cent on balances up to \$10,000. No interest was payable on ordinary account balances in excess of this amount. For special society cheque accounts lower rates applied to balances in excess of \$6,000. Interest is calculated on the lowest balance in the account each month.

School Banking

Special banking facilities for school children were introduced to South Australia with the inauguration of the School Banking Department of the Savings Bank of South Australia on 28 April 1908. For many years this bank was the only one engaged in this field, but in recent years the Commonwealth Savings Bank and some private banks have commenced similar services at some private schools. However, the Savings Bank of South Australia has sole access to public schools, and retains a major share of school banking business.

With a view to encouraging thrift in school children, deposits as small as one cent are accepted.

Details of school banking in this State are as follows:

	Agencies	Operative Accounts '000	Depositors' Balances \$'000
30 June 1963	861	168	3,242
1964	877	173	3,410
1965	883	179	3,607
1966	883	181	3,775
1967	869	186	3,941

CURRENCY

PRE-DECIMAL CURRENCY

When arrangements were made for the establishment of a penal settlement in the Colony of New South Wales, no provision was made for an internal currency. Convicts received no wages and the needs of the civil and military personnel were to be supplied from the Commissariat or communal store. However, after settlement with increasing population and commerce it became evident that some form of official currency was required. Consequently, in 1792, a quantity of Spanish dollars, which were regarded as an almost international currency, was sent from England to alleviate the position. Had the coin remained in Australia the scarcity of coin would not have been so great, but the opportunities for trade were many and resulted in coin leaving Australia almost as fast as it arrived.

As was to be expected in the circumstances the lack of a sufficient quantity of currency gave rise to many different forms of payment being introduced into the Colony; prominent among these were private promissory notes. However, as some of these forms of payment were open to abuse it became necessary to provide sufficient coinage which would obviate the need for these other forms of payment.

The first successful attempt to prevent the export of coin was with the 'holey dollar'. Under the direction of Governor Macquarie a shipment of Spanish dollars received in 1812 had the centre of each dollar punched out, leaving a 'ring' and a 'dump'. In addition, Macquarie imposed very severe penalties against anyone found engaged in the export of dollars. By 1822, following further large imports of Spanish dollars, the dollar had become the basic currency of the Colony and there was agitation to make it the official currency. With the support of the new governor, Governor Brisbane, legislation passed earlier by Macquarie prohibiting the use of dollars other than 'holey dollars' was repealed. 'Holey dollars' and 'dumps' were recalled and reissued as threequarter and quarter dollars respectively. It was also intended to give the halfpenny the value of one cent or one hundredth of a dollar. These early attempts to introduce a decimal currency system into Australia were short-lived however, as in 1825 the British Government passed legislation providing a basic English 'sterling' currency, consisting of the pound (£) divided into twenty shillings (s) each of twelve pence (d) to be used in the Colony and until 1909 British coin was the only official currency and circulated freely until 1931 when the Australian pound was devalued.

Australian Coinage

At the time of Federation the coinage in Australia consisted of United Kingdom gold, silver and bronze coins. The Constitution, in 1901, gave the Commonwealth Parliament power to make laws with respect to currency, coinage and legal tender and it assumed this power in 1909 when the Coinage Act was passed prescribing the standard weight and fineness of coins. The first coins exclusively for circulation in Australia—silver florins (two shillings), shillings, sixpences and threepences—were minted in 1910 by the Royal Mint, London. These were followed by bronze coins in 1911. The Melbourne Branch of the Royal Mint in 1916 produced the first Commonwealth coins (pence) minted in Australia. The Sydney Branch of the Royal Mint commenced production of halfpennies in 1919 and, in 1922, the Perth Branch minted its first pennies.

The net issues of Australian silver and bronze coins from 1910 until 30 June 1966 were crown (5s) \$551,000; florin (2s) \$47,060,000; shilling (1s) \$21,522,000; sixpence (6d) \$15,975,000; threepence (3d) \$13,010,000; total silver coin \$97,992,000; penny (1d) \$5,597,000; halfpenny ($\frac{1}{2}$ d) \$1,342,000; total bronze coin \$6,938,000.

Australian Notes

In 1901 notes in circulation in Australia consisted of bank notes payable in gold coin and issued by the trading banks, and Queensland Treasury notes. Bank notes circulated in all States except Queensland but were not legal tender except for a brief period in 1893 in New South Wales. Queensland Treasury notes were issued by the Queensland Government and were legal tender in that State. Notes of both categories circulated until 1910 when the Commonwealth Parliament, as provided for by the Constitution, passed legislation in the form of the Australian Notes Act and the Bank Notes Act. The former prohibited the circulation of State notes as money while the latter imposed a tax of 10 per cent per annum on all bank notes issued, other than by the Commonwealth, and not redeemed.

Between 1910 and the changeover to decimal currency Australian notes were issued in denominations of 10s, £1, £5, £10, £20, £50, £100 and £1,000. Notes of £1,000 denomination were never issued to the public but used initially by banks to effect inter-bank transfers and later by the Reserve Bank to facilitate internal transfers. The issue of £20, £50 and £100 notes to the public ceased in 1945 and immediately prior to the changeover to decimal currency, notes in denominations of 10s, £1, £5 and £10 were on issue. All £s.d. notes issued before the changeover remain legal tender to any amount within Australia until a date to be fixed by proclamation as provided in the *Reserve Bank Act* 1965.

South Australian Coinage

Apart from gold coin minted by the branches of the Royal Mint at Sydney, Melbourne and Perth the only other gold coin struck in Australia was a one pound (£1) piece issued for a brief period by the Assay Office of South Australia.

Following the discovery of gold in Victoria, South Australia found itself losing currency to that colony and in January 1852, as a result of representation by local merchants, the Bullion Act, 1852 was passed. Under this Act a Government Assay Office was established in Adelaide where gold was assayed and made into ingots of various sizes which were stamped and deposited at any bank nominated by the owner.

Later, agitation for the coinage of pieces which would be reconisable and circulate as legal tender, particularly in other colonies, resulted in an amendment to the Bullion Act being passed. The clause in the old Act compelling the banks to issue notes in exchange for assayed bullion was repealed and the Government assayer was authorised to issue coins to the value of five pounds, two pounds, one pound and ten shillings; the gold to be valued at seventy-one shillings per ounce; and such coins to be legal tender. The only denomination actually issued however, was the so-called Adelaide sovereign or pound piece; in all a total of 24,648 of these pieces were struck before their issue ceased.

Owing to the gold in these sovereigns being officially valued at seventy-one shillings per ounce, compared with the English value of seventy-seven shillings and ninepence, they were actually worth twenty-one shillings and tenpence half-penny. Although they circulated for a time, the realisable value of their gold content assured their ultimate disappearance.

Also included in the amendment to the Bullion Act was provision for the Governor to close the Assay Office if the quantity of gold bought in any consecutive period of four weeks fell below 4,000 ounces. Subsequently the market price of gold rose steadily until finally the banks announced their readiness to buy gold at seventy-four shillings per ounce. Thus the Assay Office, at seventy-one shillings per ounce, was unable to attract supplies of gold and on 17 February 1853, in compliance with the amendment to the Bullion Act, the Assay Office closed and with it the brief history of South Australian coinage.

DECIMAL CURRENCY

As has already been mentioned, early in 1822 there was a large scale import of Spanish dollars into Australia as the first step in an attempt to establish the dollar as the standard money of the Colony of New South Wales. These efforts were almost successful but full transfer to a dollar standard was forestalled by the British Government's decision to institute a sterling-exchange standard with a fixed rate of exchange and British coins in local circulation.

The next attempt to change to decimal currency was in 1902 when a Select Committee of the first Federal Parliament recommended that a decimal currency system be introduced. Although the report was adopted by the House of Representatives and a further resolution urging the introduction of decimal currency was carried unanimously in 1904, the Government of the day took no action. However, at several Imperial Conferences from 1907 to 1911, the Australian Government, backed by other members of the then British Empire, sought common action for the introduction of decimal currency by the entire Empire, but these moves were not encouraged by the United Kingdom which was unwilling to make the change.

Little more was heard of decimal currency until 1937 when a Royal Commission on Banking recommended, among other things, the adoption of decimal currency in Australia. Again, however, no action was taken.

It was not until the rapid economic development of the 1950s when a number of member countries of the Commonwealth changed to decimal currency that the decision to change currencies in Australia was made somewhat easier than in the past. The final decision to change to a decimal system in Australia probably stems from the formation in 1957 of the Decimal Currency Council which embarked upon a vigorous campaign to enlist the support of business, professional and employee organisations throughout Australia in support of its cause.

Following this campaign, the Commonwealth Government, in 1959, appointed a Decimal Currency Committee to investigate the advantages and disadvantages of a decimal currency; to examine the cost of replacement or adaption of monetary machines; and, if a decimal currency was favoured, to advise on the most suitable unit of account and denominations of subsidiary currency. The Committee, in its report tabled in August 1960, advocated the adoption of a decimal currency system based on a ten shilling unit. It recommended that 20-cent, 10-cent, 5-cent and 1-cent coins should be provided and that thought might be given, at a later date, to issuing a 50-cent coin. It also suggested consideration be given to the minting of a 2-cent coin.

Consequently, on 7 April 1963, the Commonwealth Treasurer announced the Government's decision to adopt a system of decimal currency and legislation in the form of the *Currency Act 1963* providing for the introduction of the new currency and the establishment of a Decimal Currency Board was passed and became law on 30 October 1963. After almost three years preparation and planning, the decimal currency system was introduced on 14 February 1966. The

system is based on a major unit—the dollar—equal to ten shillings in the old currency and the minor unit—the cent—is one hundredth part of the major unit and equal to 1.2 pence. New notes and coins began to circulate from the date of the changeover which also marked the beginning of a dual-currency transitional period during which £.s.d. and \$ c were both legal currencies. The end of the dual-currency transitional period was signalled officially by a proclamation made pursuant to Section 21 of the *Currency Act 1965* and published on 8 June 1967 which fixed 1 August 1967 as the date on which the decimal system became the sole legal currency system in Australia.

Legislation

Under the Constitution the Commonwealth has power to make laws with respect to currency, coinage and legal tender, and the issue of paper money. The *Coinage Act 1909-1947* provided for the £.s.d. system of currency and also provided for the denomination and specifications of the £.s.d. coins and their legal tender. The *Reserve Bank Act 1959* provided for the £.s.d. notes and for their legal tender.

Legislation for the introduction of decimal currency provided for the establishment of the new decimal system; for the decimal notes and coins and for their legal tender; for the transition from the £.s.d. to the decimal system; and for the termination of the £.s.d. system of currency. In addition the Commonwealth and State Governments had to legislate to substitute amounts of \$ c for amounts of £.s.d. in their various Acts, and to provide for numerous administrative requirements relating to the transition from £.s.d. to \$ c.

Commonwealth Legislation

The *Currency Act 1963* was the first of a number of Acts required to give effect to the decision to introduce a new currency system. It was intended however, that further legislation would be enacted to cover the dual-currency transitional period, and some other matters remaining outside the scope of the 1963 Act.

The *Decimal Currency Board Act 1965* which repealed parts of the *Currency Act* which had no application to the Decimal Currency Board provided for the official administrative arrangements for the introduction of the new currency. This Act as amended became the *Decimal Currency Board Act 1963-1965*.

The *Currency Act 1965* took in those provisions relating to currency, coinage and legal tender which had formerly been included in the 1963 Act and, in addition, established the denominations of the new decimal coins, defined the relationship of the dollar and cent, and established the relationship between \$ c and £.s.d.

The *Reserve Bank Act 1965* amended the *Reserve Bank Act 1959* to provide for the new decimal notes and concurrent use of £.s.d. and the decimal notes.

Additional legislation to give the textual alterations in Commonwealth Acts was contained in the *Statute Law Revision (Decimal Currency) Act 1966-1967*.

State Legislation

Each State Government passed legislation substituting amounts of \$ c for amounts of £.s.d. in State laws and providing for official administrative arrangements made necessary by the introduction of decimal currency. In South Australia this legislation was contained in the *Decimal Currency Act, 1965* which amended the law of the State in consequence of the adoption of decimal currency in Australia. In addition the *Lottery and Gaming Act Amendment Act (No. 3), 1965* and the *Stamp Duties Act Amendment Act, 1965* amended the principal Acts relating to decimal currency as provided for by the *Currency Act 1965*.

Decimal Coinage

The coinage adopted followed the recommendations of the Decimal Currency Committee. Thus six new coins were introduced *i.e.* a 50-cent coin (silver); 20-cent, 10-cent and 5-cent coins (all cupro-nickel); and 2-cent and 1-cent coins (both bronze).

The construction of the Royal Australian Mint in Canberra, which was officially opened in February 1965, provided the Commonwealth Government for the first time with facilities for minting its own coinage. Prior to June 1966 some cupro-nickel coins were produced at the Royal Mint, London but subsequently the Royal Australian Mint has taken over this function and all Australia's coin requirements are now met by this mint with the Melbourne and Perth Branches of the Royal Mint providing some bronze coins on contract to the Commonwealth Treasury.

Total production of decimal coins to 30 June 1967 was approximately 1,170 million pieces consisting of 452 million 1c coins; 464 million 2c; 89 million 5c; 41 million 10c; 86 million 20c; and 37 million 50c coins.

Decimal Notes

The *Reserve Bank Act* 1965 authorises the Bank to issue Australian notes in denominations of \$1, \$2, \$5, \$10, \$20 or \$50 or in any other denomination that the Treasurer determines. The Act came into force on 14 February 1966 and notes of \$1, \$2, \$10 and \$20 denominations were issued forthwith as legal tender.

During 1966-67 banks confined their issues to dollar notes and withdrew from circulation all £s.d. notes deposited with them. At 30 June 1967, £s.d. notes comprised only about 5 per cent of the total note circulation of \$930 million.

Five-dollar notes were first issued to the public on 29 May 1967 and by the end of June 1967 \$5 notes to the value of \$43 million had been issued. By the same date approximately 457 million dollar denomination notes had been printed at the Reserve Bank's Note Printing Branch in Melbourne. Apart from the major requirement for dollar notes to replace £s.d. notes withdrawn from circulation, production was applied to the building up of reserve stocks and to the normal replacement in circulation of dollar notes unfit for further issue.

Legal Tender

Since 1 August 1967 the use of £s.d. as a system of currency has not been recognised but £s.d. notes and coins have retained their values in terms of dollars and cents and have remained legal tender for the payment of amounts of \$ c. In practice however, the £s.d. notes have disappeared from circulation; only decimal notes having been issued by the banks since C-day (14 February 1966). There are still significant numbers of £s.d. coins in circulation but because of the close associability between the 2s, 1s and 6d coins and the 20c, 10c and 5c coins, the withdrawal of the former is not a matter of urgency as far as the change of currency is concerned. Although 3d, 1d and ½d will continue to be legal tender in lots of 6d for accounts of 5c, these coins will no longer be required for cash transactions. Banks will continue to accept them in lots of 6d but their issue to the public ceased after 1 August 1967.

A contract made after 1 August 1967 will be unenforceable if in £s.d. A reference to an amount of money will have no legal significance if the amount is expressed in terms of £s.d. The one exception to this general rule concerns a will or other testamentary instrument. Such a document will not be invalidated simply because it is not made out in terms of \$ c.

13.2 INSURANCE

LIFE INSURANCE

The activities of life insurance companies operating in South Australia have been regulated by Commonwealth legislation since 1945. Under the *Life Insurance Act* 1945-1965, every company transacting life insurance business must be registered and must lodge a deposit of up to \$100,000, as security for policy holders, with the Commonwealth Treasurer. The Act is administered by the Insurance Commissioner who has wide powers of inquiry into the activities of any registered company.

Each company must establish at least one statutory fund and all moneys received in respect of life insurance business must be paid to, and form part of the assets of these funds. An actuarial investigation must be conducted at least once every five years, with the distribution of shareholders dividends and policyholders bonuses subject to sufficient surplus being revealed by such investigation. All premiums must be actuarially approved and the Commissioner has powers to suppress policies or proposals which he deems misleading.

Companies are required to furnish to the Commissioner certain accounting reports and statistical returns and it is from these returns that the statistical details in this section are obtained. The individual returns cover operations for the accounting year ending in the calendar year shown. For a majority of companies the closing date is 31 December, but a number balance earlier in the year.

During 1966 there were thirty-five companies operating in South Australia. All conducted ordinary life insurance business; twenty-eight also undertook superannuation business, i.e. the issuing of policies to the trustees of funds established for the provision of superannuation or retirement benefits, and eleven recorded industrial businesses whereby premiums are collected at intervals of less than two months.

Policies in Force

There has been a rapid growth in life insurance business in the post-war years. For policies in force at the end of 1945, the sum assured including bonus additions amounted to \$130 million; by 1949 the figure has passed \$200 million and the \$500 million mark was reached in 1956. In 1966 life insurances in force exceeded \$1,580 million.

The following table illustrates the growth in life insurance business over the last ten years. Although total business has been increasing, the number of industrial policies has actually declined and industrial premiums have risen only slowly. The heavy relative decline in this form of business has been due to the high cost of collecting premiums and to the development of superannuation and group schemes.

Life Insurance: Policies in Force, South Australia

31 December	Ordinary (including Superannuation)				Industrial			
	Policies	Sum Assured	Bonus Additions	Annual Premiums	Policies	Sum Assured	Bonus Additions	Annual Premiums
	No.	\$'000	\$'000	\$'000	No.	\$'000	\$'000	\$'000
1957.....	327,978	475,544	36,802	16,474	386,368	63,576	2,109	3,022
1958.....	341,088	534,616	41,820	18,065	378,679	65,107	2,312	3,065
1959.....	(a)389,071	605,433	48,090	19,868	369,621	65,986	2,575	3,077
1960.....	408,183	689,338	55,695	22,048	357,065	67,243	2,860	3,102
1961.....	424,267	773,307	63,418	24,075	340,649	68,255	3,077	3,111
1962.....	438,417	866,881	74,941	26,330	326,302	70,754	3,485	3,173
1963.....	449,824	961,053	87,634	28,628	312,496	73,418	4,062	3,238
1964.....	467,065	1,083,941	102,045	31,705	299,721	77,968	4,714	3,378
1965.....	486,237	1,212,109	117,815	34,933	288,863	82,268	5,410	3,523
1966.....	503,001	1,353,568	137,001	38,306	275,731	85,430	6,115	3,612

(a) Some 'Voluntary Group' policies, previously counted as one policy, were converted to single policies for each person insured.

Details of policies in force at the end of 1966 are presented in the following table according to the type of policy and the nature of the business. The distinction between endowment insurance and endowment policy is that endowment insurance provides for the payment of the sum assured upon the insured reaching a specified age or upon his prior death, whereas the sum assured under an endowment policy is paid only upon the insured reaching the specified age.

Life Insurance: Policies in Force, South Australia, at end of 1966

Type of Policy	Ordinary		Superannuation		Industrial	
	Sum Assured	Annual Premiums	Sum Assured	Annual Premiums	Sum Assured	Annual Premiums
	\$'000					
Whole life insurances	571,223	12,439	19,069	528	6,082	300
Endowment insurances	372,035	15,835	158,569	6,279	77,510	3,207
Other insurances	182,303	1,132	28,307	724	—	11
Endowment	15,089	1,094	6,973	275	1,838	94
Total	1,140,650	30,500	212,918	7,806	85,430	3,612

Of the thirty-five companies undertaking ordinary business in 1966, ten accounted for 90 per cent of business registered at the end of the year, with the five largest accounting for 73 per cent. Although twenty-eight companies had superannuation policies registered, ten companies accounted for 99 per cent, and three for 75 per cent of all superannuation business.

New Policies

During 1966 a total of 63,872 new life insurance policies, with an assured value of \$239,250,000, were issued in South Australia. This number exceeded the previous highest figure of 63,242 policies issued in 1965. The value, *i.e.* amount assured, of new policies has increased continuously since 1945.

The number and value of new ordinary, superannuation, and industrial policies issued during the last five years is shown in the next table. The relative importance of industrial policies has declined from approximately 25 per cent of total value in 1945 to less than 5 per cent in 1966. The average value of industrial policies is much lower than for ordinary and superannuation policies.

Life Insurance: New Policies Issued, South Australia

Policy	1962	1963	1964	1965	1966
	NUMBER ISSUED				
Ordinary	39,463	39,385	42,262	43,521	44,725
Superannuation	4,624	4,693	5,236	5,583	5,988
Industrial	15,728	13,444	13,192	14,138	13,159
Total	59,815	57,522	60,690	63,242	63,872
	SUM ASSURED (\$'000)				
Ordinary	127,572	130,504	152,460	167,043	181,894
Superannuation	21,309	25,504	34,553	37,648	46,336
Industrial	8,754	9,175	10,777	11,254	11,021
Total	157,636	165,183	197,790	215,946	239,250

Annual premiums on new policies issued in 1966 amounted to \$6,171,000 and of this amount \$3,352,000 was for endowment insurances and \$1,878,000 for whole of life insurances. Details of sum assured and premiums payable for the various types of policy issued in 1966 are shown in the following table.

Life Insurance: New Business, South Australia, 1966

Type of Policy	Ordinary		Superannuation		Industrial	
	Sum Assured	Annual Premiums	Sum Assured	Annual Premiums	Sum Assured	Annual Premiums
	\$'000					
Whole life insurances	87,797	1,726	4,223	115	646	37
Endowment insurances	40,983	1,896	27,562	1,047	10,372	409
Other insurances	50,947	298	13,040	394	—	3
Endowment	2,167	192	1,512	55	2	—
Total	181,894	4,112	46,336	1,610	11,021	449

Life Insurance Policies Discontinued

The following table gives details of policies discontinued according to reason for discontinuance. The item 'transfer' represents the net balance from the transfer of policies between the South Australian register and those of other States. Alterations to existing policies which result in policies being replaced, sometimes by an increased number of policies, are included in 'other'.

Life Insurance: Policies Discontinued or Reduced, South Australia, 1966

Reason for Discontinuance	Ordinary		Superannuation		Industrial	
	Policies	Sum Assured	Policies	Sum Assured	Policies	Sum Assured
	No.	\$'000	No.	\$'000	No.	\$'000
Death	2,047	3,095	229	659	1,350	244
Maturity	6,740	3,789	674	1,090	15,226	1,827
Surrender	10,916	25,016	1,952	10,635	6,388	2,612
Forfeiture	8,095	30,834	105	774	3,060	3,094
Transfer	979	3,308	144	—908	214	74
Other	187	4,810	1,881	3,670	53	7
Total	28,964	70,852	4,985	15,920	26,291	7,859

Annuity Business

Life insurance companies also issue annuity policies but this form of business is at present a relatively minor aspect of life insurance activity. At the end of 1966 there were 238 annuities in force involving annual payments of \$160,000.

Premiums and Claims

Details of premium income and of cash payments made on behalf of policies are shown in the following table. This table does not show revenue from investment or management and commission expenses and accordingly is not a revenue and expenditure table.

Life Insurance: Premiums and Policy Payments, South Australia^(a)

Year	Premiums and Considerations for Annuities	Payments					
		Death or Disability	Maturity	Surrenders	Annuities	Cash Bonuses	Total
				\$'000			
1962.....	29,596	3,508	5,881	3,302	54	41	12,785
1963.....	32,230	4,207	6,450	3,868	55	44	14,624
1964.....	35,514	4,633	7,103	4,142	69	53	15,999
1965.....	38,933	4,921	7,507	4,536	62	63	17,089
1966.....	42,674	5,275	8,658	5,323	61	89	19,407

(a) Includes Northern Territory.

Loans Outstanding

A considerable proportion of the assets of life insurance companies is held as loans, particularly loans on the mortgage of real estate. In the following table details are given of mortgages on South Australian and Northern Territory real estate, loans on policies registered in, and 'other' loans to persons resident in these areas. Only those loans which form assets of the statutory funds, are included.

Life Insurance: Loans Outstanding, South Australia^(a)

Nature of Collateral	1962	1963	1964	1965	1966
			\$'000		
Mortgage of real estate	65,773	63,207	62,611	64,431	69,454
Policies :					
Advances of premiums	2,370	1,662	1,786	2,077	2,358
Other	7,779	8,425	9,107	10,082	11,156
Other collateral	231	214	207	272	255
Total	76,152	73,509	73,712	76,861	83,224

(a) Includes Northern Territory.

GENERAL INSURANCE

General insurance in South Australia is conducted largely by private organisations. Some government insurance, in particular workmen's compensation, is carried by the State Government's Accident Insurance Office and in addition the State Bank of South Australia insures certain properties on which it has provided mortgage finance. A number of Commonwealth Government instrumentalities also are engaged in insurance in South Australia, notably in respect of housing loans and export payments, but these Commonwealth activities are not included in South Australian statistics.

Under the Commonwealth *Insurance Act* 1932-1966, insurance companies are required to lodge a deposit with the Commonwealth Treasurer, as security against liability to policy holders. The Act does not apply to State insurance within the limits of the State concerned. However, insurance business is conducted almost entirely under State legislation. Companies, persons, or firms of persons carrying on general insurance business are required, under the Stamp Duties Act, 1923-1967, to take out an annual licence, such licence being the authority to carry on insurance business in the State. The licence fee varies with

premium income. Under the Fire Brigades Act, 1936-1958, insurance companies contribute approximately 60 per cent of the cost of maintaining the services of the Fire Brigades Board.

Compulsory insurance for workmen's compensation and motor vehicle third party risks is provided for under State legislation. Employers, unless specifically exempted, are required under the Workmen's Compensation Act, 1932-1966 to effect an insurance cover providing compensation for workmen suffering injuries in the course of their employment. Details of workmen's compensation provisions are given in Part 7.4 pages 271-2. Under the Motor Vehicles Act, 1959-1967 all vehicles other than those belonging to the Crown must be covered by a third party policy protecting the owner against any liability for death or injury to others resulting from use of the vehicle. Particulars are given in Part 11.1 pages 490-1.

The statistics in this section are compiled from returns furnished by 176 organisations, including the Government Insurance Office and the State Bank. Each return gives details of the organisation's activities during a twelve month period ending within the year shown. Some insurance transactions are completely excluded from the returns.

The following tables give details of revenue and expenditure for general insurance over the last five years. The tables contain selected items of statistics and should not be combined and construed as profit and loss statements or revenue accounts. The first table shows premiums and investment income earned by the companies. Premiums represent the full amount receivable in respect of policies issued and renewed in the year less returns, rebates, and bonuses, paid or credited to policy holders in the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts shown differ from 'earned premium income' for the year. Premiums have increased over the period covered by the table and hence have been greater than earned premium income in each year. Investment income relates to interest, dividends, rents, etc. from investments made within the State.

General Insurance: Revenue, South Australia

Source of Revenue	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Premiums:					
Fire and sprinkler leakage ..	6,211	6,969	6,227	6,537	7,107
Householders' comprehensive	3,129	(a) 3,534	(a) 3,862	(a) 4,197	(a) 4,545
Loss of profits	570	615	697	764	772
Hailstone	227	302	314	253	363
Marine	1,343	1,567	1,485	1,366	1,600
Motor vehicle:					
Compulsory third party.	5,326	5,868	6,601	7,867	8,885
Other	10,436	12,157	13,970	15,336	16,433
Employers' liability and workmen's compensation	5,410	5,704	6,901	8,100	10,041
Personal accident	1,889	1,856	2,075	2,192	2,389
Public risk, third party	648	887	871	934	1,076
Burglary	458	(a) 393	(a) 427	(a) 475	(a) 577
Other	1,303	1,285	1,342	1,412	1,626
Total premiums ...	36,951	41,138	44,772	49,433	55,413
Revenue from investments	548	557	661	688	701
Total revenue	37,499	41,695	45,433	50,121	56,114

(a) Some business previously included as 'Burglary' now classified as 'Householders' comprehensive'.

Details of claims and other expenditure are given below. Claims include provision for outstanding claims and represent claims incurred during the year. Other expenses mainly represent payments made during the year. Taxation payments will therefore be based on income earned in previous years.

General Insurance: Expenses, South Australia

Type of Expense	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Claims :					
Fire and sprinkler leakage ..	1,279	1,435	2,017	1,748	1,914
Householders' comprehensive	801	(a) 721	(a) 748	(a) 831	(a) 1,089
Loss of profits	25	10	168	146	250
Hailstone	68	21	123	209	250
Marine	428	629	672	583	846
Motor vehicle :					
Compulsory third party.	4,304	4,738	4,972	6,975	7,350
Other	6,746	7,800	9,434	9,921	9,800
Employers' liability and workmen's compensation	3,787	3,614	4,441	5,111	6,146
Personal accident	800	906	899	999	1,094
Public risk, third party	212	236	364	306	423
Burglary	177	(a) 192	(a) 227	(a) 284	(a) 349
Other	698	642	681	730	739
Total claims	19,324	20,943	24,745	27,843	30,250
Other expenses :					
Contributions to fire brigades	588	674	646	715	781
Commission and agents' charges	4,250	4,602	5,094	5,312	5,804
Management	7,105	7,695	8,432	9,298	10,513
Taxation	1,117	1,208	1,787	1,576	1,417
Total expenses	32,384	35,123	40,703	44,744	48,765

(a) Some business previously included as 'Burglary' now classified as 'Householders' comprehensive'.

13.3 OTHER PRIVATE FINANCE

THE STOCK EXCHANGE OF ADELAIDE

In the 1860s, Green's Building in King William Street became a favourite location for trading in the bank, insurance, railway, shipping, gold, copper and silver shares of South Australia and of Victoria. From this beginning the Adelaide Stock Exchange and the Stock Exchange of South Australia came into existence, and subsequently they amalgamated to form the Stock Exchange of Adelaide on 2 September 1887, with membership limited to sixty-five. The new exchange began in Pirie Street and moved to King William Street, near Grenfell Street, in 1882. At this stage, seventy vestibule members enjoyed the right to do business with the seventy full members. The present building was erected and occupied by the Exchange in 1901.

In 1904 the Exchange was formed into a limited liability company with seventy-two shares of \$400 each, reducing to the present membership of sixty in 1955. Trading was conducted on the call system until the end of 1961 when post trading came into operation.

Basically the Exchange provides facilities for trading in securities, with transactions being conducted by brokers who constitute its membership. The Exchange operates under a set of rules and regulations which govern both the behaviour of companies, through the various listing requirements, and the conduct of members. Management is by a committee of six, elected by members, with a president and vice-president being elected from the six.

Lists of quotations are issued by the Exchange twice daily and lists of dividends and new issues are produced weekly. The *Official Record* providing enlarged and additional information is published monthly. Transfer marking and noting services are available to members of the Exchange and to the public through solicitors and accountants.

A visitors gallery overlooking the trading floor enables members of the public and organised parties to witness proceedings.

Stock Exchange of Adelaide, Turnover of Stocks and Shares

Particulars	Year Ended 30 June			
	1964	1965	1966	1967
	'000 units			
Shares:				
Industrial	13,930	11,369	14,076	10,814
Silver, lead and copper	1,556	917	621	977
Oil	(a)	2,977	2,370	2,144
Other mining	4,155	1,130	1,745	4,713
Total shares	19,641	16,393	18,812	18,649

(a) Included in 'Other mining.'

Stock Exchange of Adelaide, Turnover of Securities

Particulars	Year Ended 30 June			
	1964	1965	1966	1967
	Market Value (\$'000)			
Shares:				
Industrial	22,036	18,330	15,426	13,296
Silver, lead and copper	2,925	2,510	2,888	3,175
Oil	(a)	2,968	1,148	3,721
Other mining	3,005	1,034	1,682	5,505
Total shares	27,965	24,842	21,144	25,697
	Face Value (\$'000)			
Commonwealth loans, semi-government loans, debentures and unsecured notes	4,459	3,494	4,868	4,846

(a) Included in 'Other mining.'

Stock Exchange of Adelaide, Official Listings

At 30 June

Year	Listed Companies	Listed Securities	
	Number	Number	Nominal Value
			\$'000
1964.....	455	1981	10,262,000
1965.....	455	2240	10,589,000
1966.....	444	1992	11,073,000
1967.....	440	1937	11,746,000

BUILDING SOCIETIES

The operations of building societies in South Australia are regulated by the Building Societies Act, 1881-1938. The Act is administered by the Registrar of Building Societies with whom all building societies must be registered.

The societies fall into two categories—permanent societies and Starr-Bowkett societies.

Permanent societies, as their name implies, have no fixed arrangement for termination of operations. They derive their funds from the issue of shares and by receiving deposits and loans. An additional source of funds for certain permanent societies has been provided by the Commonwealth-State Housing Agreement (see page 321). Advances for the purpose of building or acquiring homes are made to members upon security of their shares, and to members and other persons by way of mortgage.

Starr-Bowkett societies have a limited life and are financed by members subscriptions. As subscriptions accumulate, interest-free advances are made to members, with priority being determined by ballot. When all members have received a loan the society is wound up with share capital being returned to shareholders as loans are repaid.

Building Societies: Societies, Shareholders and Borrowers, South Australia

Year	Societies		Shareholders		Borrowers	
	Permanent	Starr-Bowkett	Permanent	Starr-Bowkett	Permanent	Starr-Bowkett
1962-63	5	21	14,781	6,479	3,296	2,337
1963-64	5	21	15,993	6,355	3,585	2,427
1964-65	5	21	16,561	6,185	3,870	2,590
1965-66	5	21	17,744	5,867	4,094	2,493
1966-67	5	21	17,836	5,886	4,347	2,385

Details of assets and liabilities of these societies, given in the following table, are compiled from individual returns with a variety of balancing dates. The figures for each year represent the aggregate of returns with balancing dates in that year.

Building Societies: Assets and Liabilities, South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Assets :					
Advances on mortgages and shares	12,530	13,967	15,790	17,239	19,470
Land and buildings	332	332	334	412	407
Other investments	297	320	396	448	487
Cash and deposits	192	355	241	166	268
Other	32	32	41	52	39
Total assets	13,383	15,005	16,801	18,317	20,671
Liabilities :					
Subscriptions	6,768	7,332	7,959	8,430	9,450
Loans due to Government (a)	4,142	4,977	5,857	6,712	7,712
Deposits	1,567	1,720	1,804	2,010	2,202
Reserves and profits	844	911	971	1,043	1,090
Bank overdraft	4	—	133	59	161
Other	58	66	79	64	56
Total liabilities	13,383	15,005	16,801	18,317	20,671

(a) Loans made to permanent building societies under the Commonwealth-State Housing Agreement.

Details of financial transactions by building societies during 1966-67 are given in the next table.

Building Societies: Transactions, South Australia, 1966-67

Particulars	Permanent	Starr-Bowkett	Total
	\$'000		
Income :			
Interest on mortgage loans	906	—	906
Other	110	41	151
Total	1,016	41	1,057
Expenses :			
Interest on borrowed funds	775	—	775
Administration and taxation	169	29	198
Total	944	29	973
Deposits :			
Received	982	—	982
Repaid	794	—	794
Government housing funds (a) :			
Received	1,067	—	1,067
Repaid	135	—	135
Advances :			
Paid	4,010	402	4,412
Repaid	1,730	355	2,085

(a) Transactions between Societies and State Treasury.

CO-OPERATIVE SOCIETIES

For the purpose of collecting the statistics in this section co-operative societies have been defined as producing, manufacturing, marketing or distribution societies which substantially fulfil the following conditions:

1. The greater part of the business of such a society to be transacted with its own shareholders.
2. Any distribution of surplus after payment of dividend on share capital to be amongst suppliers or customers in proportion to the business transacted with the society.
3. Limitation of voting power to one vote per person.
4. Dividend on share capital not to exceed 10 per cent.

All such societies must be registered under the Industrial and Provident Societies Act, 1923-1966. The Registrar of Industrial and Provident Societies must approve the rules of each society before it may be registered.

Co-operative societies may be classified under three broad headings—those serving producers, those serving consumers, and those fulfilling both functions. In the following table societies and members have been classified under these headings.

Co-operative Societies: Societies and Membership, South Australia

Particulars	1962-63	1963-64	1964-65	1965-66	1966-67
Societies :					
Producers societies	36	37	40	41	40
Consumers societies	19	19	19	18	17
Producers and consumers societies	14	14	14	14	14
Total	69	70	73	73	71
Members :					
Producers societies	16,239	16,530	16,784	18,137	18,425
Consumers societies	88,783	93,382	95,618	98,257	106,981
Producers and consumers societies	3,261	3,312	3,426	3,648	3,824
Total members	108,283	113,224	115,828	120,042	129,230

Of the 40 producers societies operating in 1966-67, 7 were co-operative wineries or distilleries, 10 represented dairy producers, and 12 were associated with fruit and vegetable production. Seven of the remaining 11 societies were associated with other rural production. Of the 17 co-operative consumers societies, 8 were trading as general storekeepers, the remainder offering specialist products or services. Producer-consumer societies were generally associated with the fruitgrowing industry.

Particulars of the aggregate income and expenditure of co-operative societies for the last five years are given in the following table.

**Co-operative Societies: Income, Expenditure and Appropriations
South Australia**

	1962-63	1963-64	1964-65	1965-66	1966-67
	\$'000				
Income :					
Sales	40,564	41,814	45,422	49,732	50,387
Other	3,005	3,468	3,707	4,482	4,665
Total	43,570	45,282	49,130	54,214	55,053
Expenditure :					
Purchases	31,330	33,297	36,848	37,511	37,656
Working expenses (a)	8,467	9,054	9,783	12,144	13,261
Interest on external borrowing	472	481	559	573	625
Total	40,269	42,833	47,190	50,228	51,542
Appropriations :					
Rebates and bonuses	3,110	2,459	2,340	3,443	3,317
Interest and dividends to shareholders	284	304	370	367	429
Other	575	684	789	1,023	866
Total	3,969	3,446	3,499	4,833	4,612

(a) Includes provision for depreciation and bad debts.

Details of the liabilities and assets of the societies in each category for 1966-67 are given below. The seven co-operative wineries and distilleries accounted for 36 per cent of producer society assets.

Co-operative Societies: Assets and Liabilities, South Australia, 1966-67

Particulars	Producers Societies	Consumers Societies	Producers and Consumers Societies	Total
	\$'000			
Assets (a):				
Land and buildings	5,766	2,686	1,918	10,370
Fittings, plant and machinery ..	5,282	328	951	6,561
Stock	7,798	2,377	720	10,895
Sundry debtors	3,626	406	1,884	5,916
Cash	622	216	656	1,495
Profit and loss account	88	14	—	103
Other (b)	2,169	4,040	3,566	9,775
Total	25,352	10,067	9,696	45,115
Liabilities:				
Capital	2,704	4,255	834	7,793
Loan capital	6,929	2,999	2,645	12,574
Bank overdraft	2,357	107	2,233	4,697
Sundry creditors	1,991	616	1,532	4,139
Accumulated profits	781	795	3	1,579
Reserves and reserve funds (c) .	4,234	1,164	876	6,275
Other (d)	6,356	131	1,572	8,060
Total	25,352	10,067	9,696	45,115

(a) Assets are shown at net value after deduction of provisions.

(b) Includes investments and advances to members.

(c) Excludes provision for depreciation and bad debts.

(d) Includes amounts due to members.

ESTATES OF DECEASED PERSONS

During recent years more than 80 per cent of estates of deceased persons have been administered by executors following grants by the Supreme Court of probate on wills left by the deceased. Should the executorship of a will fail for any reason, for example by the death or renunciation of a nominated executor, the Court issues 'letters of administration with the will annexed' but the more usual 'letters of administration' relate to the estates of persons who died intestate. Tables in this section contain details of estates covered by the three types of grant during specified years.

Estates generally are those located in South Australia and not necessarily estates of deceased residents of this State. The net value of an estate is the gross value less proved liabilities; these liabilities do not include Commonwealth estate duty or State succession duties.

The following table shows the number and value of estates for which probate or administration was granted by the Supreme Court during the five years to 1966.

Estates of Deceased Persons, South Australia

Year	Estates	Gross Value of Estates		Net Value of Estates	Average Net Value per Estate
		Real	Personal		
	No.	\$'000	\$'000	\$'000	\$
			MALES		
1962.....	2,345	11,929	24,615	34,312	14,632
1963.....	2,411	13,887	26,895	36,818	15,271
1964.....	2,764	14,551	29,621	41,323	14,951
1965.....	2,523	15,166	30,915	41,368	16,396
1966.....	2,651	14,563	32,112	43,456	16,392
			FEMALES		
1962.....	1,713	6,167	10,900	16,088	9,392
1963.....	1,715	5,988	10,403	15,337	8,943
1964.....	1,926	6,718	14,553	20,003	10,386
1965.....	1,892	6,476	15,914	21,256	11,234
1966.....	1,984	6,879	16,047	21,083	10,626
			PERSONS		
1962.....	4,058	18,096	35,515	50,400	12,420
1963.....	4,126	19,875	37,298	52,155	12,641
1964.....	4,690	21,268	44,174	61,327	13,076
1965.....	4,415	21,642	46,829	62,624	14,184
1966.....	4,635	21,442	48,159	64,539	13,924

The distribution of estates through various size groups and the gross value of real and personal estate respectively in each group are shown below for the years 1965 and 1966.

For both years estates with an individual net value under \$2,000 formed more than 25 per cent of the total number but less than 2 per cent of total net value, while estates under \$10,000 constituted 70 per cent of total numbers but less than 20 per cent of total net value. The few estates, about 6 per cent of the total, with an individual net value of \$50,000 or more constituted approximately 45 per cent of total net value.

Real estate formed slightly less than one-third of the total gross value for all estates.

Estates of Deceased Persons: Size and Structure of Estates, South Australia

Size of Net Estate	1965				1966			
	Estates	Value of Estates			Estates	Value of Estates		
		Gross		Net		Gross		Net
		Real	Personal			Real	Personal	
\$	No.	\$'000	\$'000	\$'000	No.	\$'000	\$'000	\$'000
Under 2,000	1,108	364	1,227	964	1,216	280	1,247	1,075
2,000 and under 4,000.....	699	752	1,671	2,054	739	750	1,818	2,165
4,000 and under 6,000.....	510	1,383	1,546	2,558	554	1,300	1,810	2,751
6,000 and under 8,000.....	475	2,076	1,554	3,297	459	1,908	1,612	3,189
8,000 and under 10,000....	327	1,553	1,573	2,915	325	1,556	1,583	2,903
10,000 and under 20,000....	562	3,094	5,404	7,924	613	3,563	5,648	8,387
20,000 and under 30,000....	258	1,861	4,833	6,348	224	1,693	4,211	5,531
30,000 and under 40,000....	136	1,445	3,540	4,721	122	1,043	3,368	4,232
40,000 and under 50,000....	89	1,179	2,974	4,028	94	1,083	3,829	4,220
50,000 and under 100,000...	157	3,415	9,666	10,936	194	3,872	9,897	13,254
100,000 and under 200,000...	76	2,908	7,016	9,675	71	3,095	6,931	9,535
200,000 and under 400,000...	12	1,199	2,188	3,209	20	1,031	4,088	4,947
400,000 and over	6	413	3,634	3,995	4	267	2,115	2,352
All estates.....	4,415	21,642	46,829	62,624	4,635	21,441	48,157	64,541

The following table provides an analysis of estates on which probate or administration was granted during 1966 according to the age group of persons leaving those estates.

Estates of Deceased Persons: Age and Sex of Deceased, Value of Estates, South Australia, 1966

Age of Deceased	Males				Females			
	Estates	Value of Estates			Estates	Value of Estates		
		Gross	Net	Average Net		Gross	Net	Average Net
No.	\$'000	\$'000	\$'000	No.	\$'000	\$'000	\$'000	
Under 21 years ..	18	87	80	4.4	(a)	(a)	(a)	(a)
21 to 29 years ...	52	543	426	8.2	7	39	35	5.0
30 to 39 years ...	47	515	415	8.8	18	170	154	8.6
40 to 49 years ...	133	2,077	1,817	13.7	51	530	480	9.4
50 to 59 years ...	343	6,074	5,668	16.5	152	1,144	1,003	6.6
60 to 69 years ...	620	10,627	9,659	15.6	310	3,557	2,861	9.2
70 to 79 years ...	819	15,536	14,698	17.9	715	8,541	8,132	11.4
80 years and over	593	10,562	10,067	17.0	708	8,634	8,113	11.5
Age not stated ..	26	654	626	24.1	23	310	306	13.3
All ages	2,651	46,675	43,456	16.4	1,984	22,925	21,084	10.6

(a) Included with age group 21 to 29 years.

During each of the four years for which this analysis has been made there was a general tendency for the average net value of estates to increase progressively through the age groups. However, in both 1963 and 1965 the average size of estates decreased in the two highest age groups for males. Other exceptions to the general trend have usually been in groups containing relatively few estates of which one or two were of exceptional value.

REAL ESTATE MORTGAGES

The Real Property Act, 1886-1967, provides for the registration of mortgages on real estate and details of new loans and discharges are given in the following table.

Mortgages: Real Estate, South Australia

Year	New Loans		Discharges	
	No.	\$'000	No.	\$'000
1957-58	21,039	88,692	14,478	40,722
1958-59	24,395	113,926	16,715	43,072
1959-60	28,874	124,337	19,454	50,791
1960-61	29,187	164,801	20,093	56,426
1961-62	28,070	137,072	21,331	59,782
1962-63	33,929	181,982	25,607	74,785
1963-64	37,813	207,097	29,002	93,116
1964-65	38,631	220,077	30,334	95,425
1965-66	38,779	262,812	30,661	104,547
1966-67	37,937	215,926	30,689	104,808

New loans in 1966-67 were lower than in the two previous years. The number of new loans in 1966-67 was 80 per cent higher than in 1957-58, and during this period the average amount of each new loan has increased from \$4,216 to \$5,692. In 1965-66 both the number of loans and the average amount (\$6,777) were higher than in the latest year.

INSTALMENT CREDIT FOR RETAIL SALES

The post-war era has seen extensive development in the use of instalment credit schemes in retail merchandising. Instalment credit is defined as covering all schemes under which repayment is made by regular predetermined instalments, such as hire-purchase, time payment, budget accounts and certain personal loans. Lay-bys and credit accounts not involving regular repayments are excluded.

Care should be taken in relating figures in this section to those for retail sales as the following statistics include certain sales to final purchasers, such as plant, machinery and tractors, which are not covered by the survey of retail sales. Transactions specifically excluded are the financing of sales of land and buildings, property improvements, services such as repair work and travel facilities, and rental and leasing schemes.

Although of declining relative importance, hire-purchase remains the principal form of instalment credit. The distinguishing feature of a hire-purchase agreement is that ownership of the goods does not pass to the purchaser until the final instalment has been paid. Hire-purchase transactions include the

letting of goods with an option to purchase and agreements to purchase by instalments, irrespective of whether the instalments are described as rent, hire or otherwise. Hire-purchase transactions are regulated by State legislation through the Hire-Purchase Agreements Act, 1960-1966, which provides for the content of hire-purchase agreements and for the rights and duties of parties to such agreements.

Details of instalment credit arranged during 1966-67 are given in the next table according to the nature of the commodity financed. In this and the following table the motor vehicle group includes new and used motor cars, motor cycles, commercial vehicles, tractors, caravans, motor parts and accessories. Plant and machinery includes farm machinery and implements, earth moving equipment, aircraft, industrial plant and machinery, business machines, and commercial refrigeration. Included in household and personal goods are furniture and furnishings, domestic refrigerators, electrical goods, musical instruments, bicycles, and other household and personal goods.

Instalment Credit for Retail Sales: New Agreements

South Australia and Northern Territory, 1966-67

Particulars	Unit	Motor Vehicles, Tractors, Etc.	Plant and Machinery	Household and Personal Goods	Total
Hire-purchase :					
Number of agreements	'000	29.6	2.8	66.2	98.5
Value of goods (a)	\$ million	40.6	6.5	12.6	59.6
Amount financed (a)	\$ million	27.4	4.3	9.9	41.6
Other instalment credit :					
Amount financed (a)	\$ million	20.7	0.4	17.0	38.1

(a) Excludes hiring charges, interest and insurance.

Instalment credit transactions may be divided into two classes of business; retail business and non-retail finance business. The former category covers retailers providing their own finance and subsidiaries set up by retailers primarily for the purpose of financing their own sales. All other businesses engaged in instalment credit financing of retail sales, irrespective of whether their main activity is finance, constitute non-retail finance business.

In the following table amounts financed in recent years are shown by class of business. The figures relate to the type of business undertaking the agreement, even if the agreement is subsequently assigned, discounted or mortgaged with another type of business.

Of the \$46.3 million provided by non-retail finance businesses for motor vehicle purchases in 1966-67, \$22.4 million was for new vehicles and \$23.9 million for used vehicles.

Instalment Credit for Retail Sales: Amount Financed^(a)**South Australia and Northern Territory**

Year	Motor Vehicles, Tractors, Etc.	Plant and Machinery	Household and Personal Goods	Total
\$ million				
RETAIL BUSINESSES				
1962-63	2.5	0.3	23.8	26.6
1963-64	2.6	0.3	22.5	25.4
1964-65	2.3	0.3	23.0	25.6
1965-66	2.0	0.4	20.7	23.1
1966-67	1.8	0.3	18.6	20.7
NON-RETAIL FINANCE BUSINESSES				
1962-63	38.4	3.5	6.9	48.8
1963-64	44.9	3.8	7.6	56.3
1964-65	55.6	4.2	8.2	68.0
1965-66	47.6	4.4	8.1	60.2
1966-67	46.3	4.3	8.3	59.0
ALL BUSINESSES				
1962-63	40.9	3.8	30.7	75.4
1963-64	47.6	4.1	30.1	81.8
1964-65	57.9	4.5	31.2	93.6
1965-66	49.6	4.8	28.8	83.3
1966-67	48.1	4.7	26.9	79.7

^(a) Excludes hiring charges, interest and insurance.

Particulars of instalment credit provided by both classes of business were first collected in 1957, and details of balances outstanding at the end of each of the last five years are given below.

Instalment Credit for Retail Sales: Balances Outstanding^(a)**South Australia and Northern Territory***At 30 June*

Particulars	1963	1964	1965	1966	1967
\$ million					
Type of business					
Retail businesses	39.7	37.1	35.1	31.5	27.7
Non-retail finance businesses	75.6	84.7	102.6	102.0	101.1
Total	115.3	121.7	137.7	133.5	128.7
Type of credit					
Hire-purchase	84.6	87.4	90.7	84.2	75.3
Other instalment credit	30.8	34.4	47.0	49.3	53.5
Total	115.3	121.7	137.7	133.5	128.7

^(a) Includes hiring charges, interest and insurance.

APPENDIX A

STATISTICAL SUMMARY

In the next 22 pages, a historical summary of some of the more important statistics relating to South Australia is shown. This is intended to present a general picture of the development of the State, with details being given (wherever they are available) for every 5th year for the period 1836-1926, and for each single year thereafter. Naturally the range of statistics available for the early years of the colony is very limited, and in addition it is not always possible to achieve perfect comparability in presenting details covering a period of some 130 years. Generally, all series on each page relate to either financial or calendar years but some financial year series have been included on pages which contain information shown in calendar years.

The first year shown on each page is the earliest for which any series on that page is available. Blanks at the top of some columns indicate that information relating to these particular series either was not collected or is not available for these early years, or is not available on a basis comparable to more recent statistics.

All major breaks in series are covered by footnotes, but minor changes are not so recorded, and the statistics should be interpreted with this in mind. An example can be quoted from the table on deaths from principal causes (page 575) where comparability is affected somewhat by changes in classification, particularly in 1950, but no footnote to this effect has been included.

The following standard symbols have been used throughout the summary:

'n.a.' Not available.

'—' Nil.

'p' Preliminary information subject to revision.

POPULATION

Year	Population Estimate at 31 Dec. (a)			Population Growth			
	South Australia			Recorded Natural Increase	Rate of Natural Increase	Total Increase	Rate of Population Growth
	Males	Females	Persons				
				(b)	(c)		%
1836.....	309	237	546			546	
1841.....	8,755	6,730	15,485			855	5.84
1846.....	14,711	11,182	25,893		22.29	3,433	15.29
1851.....	37,321	29,217	66,538	1,786	26.85	2,838	4.46
1856.....	56,264	51,622	107,886	3,341	30.97	10,499	10.78
1861.....	67,409	63,403	130,812	3,589	28.00	5,230	4.17
1866.....	88,024	80,883	168,907	4,029	24.39	7,430	4.60
1871.....	97,019	91,625	188,644	4,704	25.21	4,098	2.22
1876.....	116,894	107,666	224,560	4,674	21.51	14,484	6.89
1881.....	152,453	133,518	285,971	6,696	23.81	9,578	3.47
1886.....	160,814	145,896	306,710	6,943	22.54	-2,603	-0.84
1891.....	168,826	155,895	324,721	6,526	20.23	5,774	1.81
1896.....	179,024	173,043	352,067	5,974	16.95	99	0.03
1901.....	(d) 180,440	(d) 178,890	(d) 359,330	(d) 5,105	14.29	(d) 2,080	0.58
1906.....	184,803	181,710	366,513	5,049	13.90	3,892	1.07
1911.....	214,061	205,331	419,392	7,019	17.05	12,530	3.08
1916 (e).....	212,585	229,253	441,838	6,780	15.35	-4,147	-0.93
1921.....	251,170	250,572	501,742	6,992	14.07	10,736	2.19
1926.....	285,013	275,912	560,925	6,606	11.92	13,877	2.54
1931.....	289,397	287,682	577,079	4,191	7.28	2,612	0.45
1932.....	290,254	289,039	579,293	3,564	6.16	2,214	0.38
1933.....	291,727	291,019	582,746	3,996	6.88	3,453	0.60
1934.....	292,531	291,958	584,489	3,056	5.24	1,743	0.30
1935.....	293,667	293,095	586,762	3,107	5.31	2,273	0.39
1936.....	294,835	294,935	589,770	3,447	5.86	3,008	0.51
1937.....	295,653	296,144	591,797	3,738	6.34	2,027	0.34
1938.....	297,604	298,238	595,842	3,871	6.53	4,045	0.68
1939 (e).....	299,212	300,101	599,313	3,879	6.50	3,471	0.58
1940 (e).....	297,885	301,171	599,056	4,309	7.19	-257	-0.04
1941 (e).....	301,645	304,721	606,366	4,677	7.78	7,310	1.22
1942 (e).....	303,511	307,467	610,978	4,566	7.50	4,612	0.76
1943 (e).....	305,655	310,372	616,027	6,663	10.86	5,049	0.83
1944 (e).....	308,853	314,177	623,030	7,327	11.83	7,003	1.14
1945 (e).....	312,588	318,294	630,882	7,984	12.73	7,852	1.26
1946 (e).....	317,238	323,180	640,418	9,352	14.72	9,536	1.51
1947 (e).....	325,399	329,233	654,632	0,102	15.62	14,214	2.22
1948.....	335,085	335,530	670,615	9,122	13.79	15,983	2.44
1949.....	349,600	346,018	695,618	9,669	14.21	25,003	3.73
1950.....	364,705	358,138	722,843	10,566	14.89	27,225	3.91
1951.....	375,188	368,597	743,785	10,279	14.03	20,942	2.90
1952.....	388,433	380,137	768,570	10,834	14.35	24,785	3.33
1953.....	397,610	388,055	785,665	11,194	14.42	17,095	2.22
1954.....	409,733	398,517	808,250	11,048	13.87	22,585	2.87
1955.....	423,042	411,619	834,661	10,958	13.36	26,411	3.27
1956.....	436,807	425,145	861,952	11,371	13.40	27,291	3.27
1957.....	448,411	437,841	886,252	11,960	13.68	24,300	2.82
1958.....	458,401	449,652	908,053	12,304	13.72	21,801	2.46
1959.....	471,868	462,629	934,497	12,429	13.49	26,444	2.91
1960.....	483,802	473,220	957,022	13,162	13.93	22,525	2.41
1961.....	493,356	483,765	977,121	14,584	15.03	20,099	2.10
1962.....	501,920	493,910	995,830	13,129	13.32	18,709	1.91
1963.....	513,255	506,535	1,019,790	13,166	13.06	23,960	2.41
1964.....	527,594	521,557	1,049,151	11,960	11.56	29,361	2.88
1965.....	542,635	537,312	1,079,947	12,103	11.38	30,796	2.94
1966 (a).....	554,810	549,780	1,104,590	10,996	10.07	21,534	1.99
1967 (a).....	561,833	556,644	1,118,477	(b) 11,315	10.18	13,887	1.26

(a) Figures subsequent to June 1966 include full-blood Aborigines. Earlier figures exclude full-blood Aborigines.

(b) Births and deaths of full-blood Aborigines, where identified in registrations, have been excluded from natural increase figures prior to 1 January 1967. From this date onwards, all vital events registered are used in the reckoning of natural increase.

(c) Excess of births over deaths per 1,000 of mean population. The population used in the calculation of rate is inclusive or exclusive of full-blood Aborigines as appropriate.

(d) Northern Territory included prior to 1901, but subsequently excluded.

(e) During the 1914-18 War, defence personnel leaving the State were treated as departures, but during the 1939-45 War they were retained in the population and troops of other States and Countries were excluded.

DEMOGRAPHY

Year	Births		Infant Deaths (a)		Deaths		Rates from Principal Causes (b)		
	Number	Rate (b)	Number	Rate (c)	Number	Rate (b)	Rates from Principal Causes (b)		
							Diseases of the Heart	Cancer	Tuberculosis
1846	937	36.19			360	14.02			
1851	2,759	41.47	539	195.36	973	14.62			
1856	4,488	41.60	610	135.92	1,147	10.63		0.05	0.98
1861	5,551	43.30	1,064	191.68	1,962	15.30		0.08	1.25
1866	6,782	41.06	1,385	204.22	2,753	16.67		0.16	1.25
1871	7,082	37.95	851	120.16	2,378	12.74		0.18	1.05
1876	8,224	37.84	1,228	149.32	3,550	16.34		0.35	1.22
1881	10,708	38.08	1,364	127.38	4,012	14.27		0.32	1.16
1886	11,177	36.29	1,409	126.06	4,234	13.75		0.34	1.34
1891	10,737	33.36	976	90.77	4,211	13.08		0.49	1.31
1896	10,012	28.44	1,015	101.02	4,038	11.47		0.53	1.17
1901	9,079	25.41	909	100.12	3,974	11.12		0.60	1.06
1906	8,921	24.57	675	75.66	3,872	10.66		0.77	1.08
1911	11,057	28.86	670	60.60	4,038	9.81	1.04	0.74	0.85
1916	11,857	26.85	868	73.21	5,077	11.50	1.29	0.81	0.93
1921	11,974	24.09	784	65.48	4,982	10.02	1.13	0.92	0.80
1922	12,001	23.77	570	47.50	4,608	9.13	1.08	0.96	0.75
1923	11,692	22.69	705	60.30	4,961	9.63	1.00	0.95	0.72
1924	11,592	22.01	595	51.33	4,870	9.25	1.04	0.97	0.73
1925	11,457	21.22	528	46.09	4,979	9.22	1.07	0.94	0.70
1926	11,483	20.73	509	44.33	4,877	8.81	1.00	0.96	0.71
1927	11,492	20.33	614	53.43	5,128	9.07	1.03	0.94	0.64
1928	11,408	19.98	542	47.51	5,147	9.02	1.07	1.01	0.60
1929	10,665	18.63	436	40.88	5,039	8.80	1.10	1.11	0.60
1930	9,984	17.42	483	48.38	4,851	8.46	1.05	1.04	0.51
1931	9,079	15.77	330	36.35	4,888	8.49	1.39	1.20	0.58
1932	8,521	14.74	312	36.62	4,957	8.58	1.48	1.13	0.48
1933	8,900	15.32	286	32.13	4,904	8.44	1.40	1.17	0.52
1934	8,459	14.50	301	35.58	5,403	9.26	1.64	1.12	0.48
1935	8,270	14.13	289	34.95	5,163	8.82	1.76	1.04	0.44
1936	8,911	15.16	277	31.09	5,464	9.29	1.87	1.26	0.40
1937	8,985	15.24	297	33.06	5,247	8.90	1.77	1.23	0.44
1938	9,410	15.86	287	30.50	5,539	9.34	2.02	1.30	0.37
1939	9,618	16.11	336	34.93	5,739	9.61	2.21	1.18	0.38
1940	10,017	16.72	356	35.54	5,708	9.53	2.25	1.25	0.37
1941	10,965	18.24	356	32.47	6,288	10.46	2.62	1.26	0.37
1942	11,278	18.51	448	39.72	6,712	11.02	2.73	1.25	0.41
1943	13,145	21.43	482	36.67	6,482	10.57	2.82	1.31	0.35
1944	13,311	21.49	387	29.07	5,984	9.66	2.64	1.27	0.30
1945	14,033	22.38	394	28.08	6,049	9.65	2.87	1.23	0.32
1946	15,813	24.90	428	27.07	6,461	10.17	3.03	1.29	0.29
1947	16,317	25.23	396	24.27	6,215	9.61	2.86	1.28	0.30
1948	15,870	24.00	472	29.74	6,748	10.20	3.08	1.42	0.28
1949	16,042	23.58	444	27.68	6,373	9.37	2.90	1.23	0.21
1950	17,306	24.39	416	24.04	6,740	9.50	3.05	1.24	0.19
1951	17,463	23.84	428	24.51	7,184	9.81	3.24	1.24	0.15
1952	17,884	23.69	413	23.09	7,050	9.34	3.10	1.29	0.12
1953	18,156	23.39	375	20.65	6,962	8.97	3.00	1.27	0.06
1954	18,227	22.89	388	21.29	7,179	9.01	3.11	1.22	0.08
1955	18,494	22.55	431	23.30	7,536	9.19	3.12	1.28	0.06
1956	18,964	22.35	377	19.88	7,593	8.95	3.24	1.16	0.05
1957	19,536	22.35	403	20.63	7,576	8.67	2.91	1.29	0.05
1958	20,047	22.35	449	22.40	7,743	8.63	2.93	1.26	0.07
1959	20,372	22.12	422	20.71	7,943	8.62	2.89	1.22	0.05
1960	20,966	22.19	397	18.94	7,804	8.26	3.06	1.21	0.04
1961	22,399	23.09	448	20.00	7,815	8.06	2.92	1.26	0.06
1962	21,361	21.67	409	19.15	8,232	8.35	3.06	1.37	0.03
1963	21,367	21.20	399	18.67	8,201	8.14	2.99	1.27	0.04
1964	20,866	20.16	397	19.03	8,906	8.61	3.24	1.32	0.01
1965	20,891	19.63	385	18.43	8,788	8.26	3.11	1.30	0.03
1966	20,319	18.62	356	17.52	9,323	8.54	3.23	1.33	0.02
1967 (d)	20,386	18.34	346	16.97	9,071	8.16			

(a) Under one year of age from 1871, under two years of age in prior years.

(b) Rate per 1,000 of mean population.

(c) Rate per 1,000 live births registered.

(d) Inclusive of full-blood Aborigines.

SOCIAL DEVELOPMENT

Marriages and Divorces; Law and Order

Year	Marriages		Divorces (b)	Bank- ruptcies	Court Convictions		Police (g)	
	Total	Rate (a)			Supreme Court (c)	Magis- trate's Courts (d)	Active Strength	Expen- diture by State (e)
								\$'000
1841.....				36	37			
1846.....	220	8.50		16	40			
1851.....	189	2.84		106	103	127		
1856.....	1,171	10.85		88	85	2,919	174	
1861.....	1,158	9.03		115	62	3,025	151	
1866.....	1,299	7.86		252	107	4,341	208	90
1871.....	1,250	6.70		247	91	4,864	187	74
1876.....	1,852	8.52		200	129	7,905	257	108
1881.....	2,308	8.21		696	213	13,231	371	164
1886.....	1,976	6.42	10	535	121	6,808	401	178
1891.....	2,315	7.21	5	142	85	6,918	388	172
1896.....	2,183	6.20	6	240	110	5,149	347	150
1901.....	2,304	6.45	6	165	98	4,968	359	152
1906.....	2,679	7.38	3	172	92	5,249	373	153
1911.....	4,036	9.80	20	190	74	7,303	423	183
1916.....	3,602	8.16	14	324	52	7,145	541	262
1921.....	4,383	8.82	88	155	97	8,968	566	391
1926.....	4,503	8.13	71	439	174	21,417	633	499
1927.....	4,501	7.96	97	493	196	22,876	645	524
1928.....	4,146	7.26	113	446	264	18,665	717	550
1929.....	3,719	6.50	106	306	261	17,353	802	630
1930.....	3,312	5.78	146	622	304	15,609	785	656
1931.....	3,069	5.33	138	996	274	14,760	763	641
1932.....	3,636	6.29	134	654	236	14,705	743	586
1933.....	3,973	6.84	163	570	224	13,060	740	550
1934.....	4,310	7.39	188	626	206	13,728	719	549
1935.....	4,845	8.28	211	597	172	14,838	705	556
1936.....	5,182	8.81	213	551	171	14,920	701	570
1937.....	5,340	9.06	206	468	183	17,297	692	599
1938.....	5,489	9.25	243	461	172	18,341	712	641
1939.....	5,670	9.50	241	630	179	20,429	724	654
1940.....	6,950	11.60	309	437	163	18,364	723	677
1941.....	6,855	11.40	273	284	177	21,990	707	689
1942.....	8,129	13.34	312	222	211	(f)	680	695
1943.....	6,263	10.21	452	93	208	22,502	674	712
1944.....	6,019	9.72	503	49	158	22,079	704	734
1945.....	5,321	8.49	617	24	203	20,554	771	770
1946.....	6,700	10.55	654	23	231	20,585	830	819
1947.....	6,668	10.31	695	32	246	24,491	833	888
1948.....	6,704	10.14	630	32	185	24,164	869	1,052
1949.....	6,247	9.18	590	52	205	22,834	928	1,208
1950.....	6,585	9.28	661	44	207	25,496	942	1,398
1951.....	6,646	9.07	637	53	307	28,675	913	1,647
1952.....	6,241	8.27	581	76	328	27,432	952	2,073
1953.....	6,149	7.92	628	91	330	30,229	982	2,429
1954.....	6,190	7.77	594	89	312	25,482	986	2,617
1955.....	6,226	7.59	624	106	340	29,264	969	2,517
1956.....	6,277	7.40	567	150	362	28,221	1,018	3,060
1957.....	6,581	7.53	529	244	459	30,658	1,143	3,303
1958.....	6,505	7.25	483	278	457	32,621	1,183	3,677
1959.....	6,614	7.18	503	366	499	34,203	1,243	4,084
1960.....	6,607	6.99	610	368	580	42,531	1,301	4,499
1961.....	6,804	7.01	718	561	606	52,155	1,376	5,043
1962.....	7,021	7.12	685	620	718	53,531	1,466	5,651
1963.....	7,302	7.24	765	584	745	57,524	1,441	5,825
1964.....	7,765	7.50	887	675	629	55,806	1,496	6,245
1965.....	8,680	8.16	852	582	713	62,612	1,558	6,912
1966.....	9,051	8.29	1,069	648	738	72,004	1,595	7,319
1967.....	9,434	8.49	929	659	707	87,451	1,660	8,417

(a) Rate per 1,000 of mean population. (b) Dissolutions made absolute. (c) Distinct persons only.

(d) Each type of offence counted separately when there are multiple charges against an individual.

(e) Net expenditure from 1939, previously gross expenditure. (f) Year ended 30 June from 1943.

(g) Year ended 30 June.

SOCIAL DEVELOPMENT

Education

Year	Number of Schools (a)		Number of Pupils (a)				Universities		Total State Expenditure on Education (d)
	Public	Private	Public Schools			Private Schools	Students	Receipts (inc. cluding Government Grants)	
			Primary (b)	High (b)	Technical (c)				
							\$'000	\$'000	
1851	115		3,031						6
1856	147		6,516						24
1861	219	236	10,711						30
1866	292	n.a.	14,690						44
1871	307	n.a.	15,791						48
1876	281	326	25,889				58	16	116
1881	405	363	36,888				74	102	268
1886	504	n.a.	44,405				197	26	254
1891	552	285	47,094				246	24	266
1896	639	232	59,944				320	24	312
1901	706	230	63,183				591	38	390
1906	708	215	57,270			9,753	626	45	380
1911	743	184	53,494	1,800	2,811	12,596	641	40	522
1916	857	(e)222	63,935	3,047	3,571	(e)14,748	491	55	650
1921	973	177	77,111	3,067	6,045	15,870	1,338	177	1,183
1926	1,019	195	79,204	6,527	7,216	18,543	1,575	221	1,762
1927	1,028	193	80,298	7,472	7,748	18,088	1,724	238	2,093
1928	1,043	191	81,231	8,060	7,750	17,867	1,778	221	2,184
1929	1,068	196	80,618	8,861	8,324	17,997	1,813	252	2,256
1930	1,074	195	80,332	9,558	7,783	17,142	2,085	322	2,330
1931	1,075	193	81,218	10,503	6,585	15,951	2,092	218	2,185
1932	1,087	190	80,905	9,880	6,302	15,965	2,084	224	1,990
1933	1,107	195	80,215	9,683	6,808	15,703	2,123	246	1,978
1934	1,111	192	78,753	8,778	7,457	16,171	2,066	238	1,936
1935	1,123	193	77,714	8,936	8,339	16,427	2,072	230	1,931
1936	1,100	190	75,411	9,280	8,654	17,007	2,025	420	2,117
1937	1,091	193	72,849	9,722	9,247	17,381	2,113	335	2,238
1938	1,078	184	69,664	9,701	9,610	17,036	2,307	323	2,359
1939	1,054	188	66,861	10,608	9,721	17,207	2,354	286	2,452
1940	1,060	182	65,682	10,546	9,980	19,974	2,443	418	2,523
1941	1,006	181	63,303	10,761	10,518	20,098	2,211	300	2,515
1942	950	178	61,326	10,173	9,768	19,207	1,799	328	2,563
1943	897	172	59,764	11,196	10,952	20,690	1,897	536	2,588
1944	909	168	59,460	12,265	12,534	21,001	2,132	405	2,816
1945	837	159	60,029	11,583	14,178	22,031	2,599	381	3,096
1946	811	157	61,242	11,870	16,175	22,317	3,723	508	3,387
1947	782	155	63,853	11,723	16,665	21,954	4,045	670	4,001
1948	773	154	66,653	11,550	18,145	23,202	4,266	620	4,673
1949	759	157	71,337	11,922	18,664	23,666	4,126	608	5,210
1950	743	158	76,369	12,732	18,910	25,112	4,069	871	6,201
1951	728	156	81,642	14,106	18,961	26,921	3,720	1,053	7,806
1952	716	155	89,630	15,121	20,206	28,851	3,612	1,387	9,842
1953	723	157	97,262	16,933	20,542	29,798	3,565	1,631	12,097
1954	716	166	105,022	17,972	21,785	30,853	3,555	1,588	13,020
1955	701	165	111,909	19,485	23,078	32,957	3,617	1,854	14,458
1956	699	171	118,365	22,134	25,647	35,326	3,828	2,132	17,293
1957	694	171	123,132	24,734	27,482	36,591	4,424	2,368	18,980
1958	674	169	125,678	28,189	31,383	37,956	4,816	3,603	21,475
1959	668	170	129,850	33,042	33,809	39,754	5,300	4,054	25,767
1960	681	171	132,372	37,901	30,404	41,418	5,723	4,669	29,944
1961	686	174	135,274	41,889	31,140	42,184	6,250	6,398	34,471
1962	682	172	136,924	46,499	32,760	43,299	6,824	7,019	40,309
1963	682	174	140,520	49,637	34,193	43,583	7,416	8,119	44,842
1964	685	177	145,042	54,026	38,448	44,519	8,203	10,760	50,854
1965	700	179	151,128	57,829	42,858	44,564	8,658	13,265	57,362
1966	698	179	154,393	60,860	43,391	44,043	9,364	11,442	64,562

(a) Includes Northern Territory prior to 1958.

(b) Net enrolment. Includes correspondence scholars and scholars receiving junior technical education.

(c) Net enrolment plus correspondence scholars. Includes Institute of Technology.

(d) Year ended 30 June.

(e) Private schools compulsorily registered—previous years incomplete.

SOCIAL DEVELOPMENT

Health

Year	Public Hospitals				Mental Hospitals(a)		Medical Practitioners Registered	Nurses Registered
	Number of Hospitals	Patients Treated	Revenue		Admissions During Year	Patients at end of Year		
			State Aid	Total				
			\$'000	\$'000				
1846.....	1				10	6	22	
1851.....	1	413			9	11	68	
1856.....	1	559			69	73	101	
1861.....	1	795			68	167	111	
1866.....	1	1,257			88	224	85	
1871.....	1	1,433			111	324	77	
1876.....	1	2,282			149	427	94	
1881.....	1	2,258			199	606	113	
1886.....	1	2,022			207	744	152	
1891.....	1	2,301			224	815	177	
1896.....	1	2,633			195	934	279	
1901.....	1	3,554			214	988	341	
1906.....	9	4,476			231	994	242	
1911.....	21	8,547	96	132	273	1,084	299	
1916.....	27	12,453	130	186	302	1,158	326	
1921.....	31	15,642	254	397	272	1,190	360	
1922.....	41	17,964	314	532	277	1,207	363	797
1923.....	43	19,905	320	510	247	1,217	389	966
1924.....	43	21,544	350	570	238	1,206	402	1,104
1925.....	45	21,640	384	642	280	1,275	434	1,194
1926.....	45	22,438	467	730	249	1,282	445	1,271
1927.....	46	24,480	500	751	272	1,306	476	1,309
1928.....	47	25,167	452	741	280	1,350	437	1,399
1929.....	49	25,787	601	915	260	1,374	445	1,472
1930.....	50	26,114	451	736	260	1,404	445	1,565
1931.....	51	26,505	356	574	250	1,395	457	1,601
1932.....	52	28,780	354	591	250	1,410	461	1,650
1933.....	52	29,306	405	678	271	1,465	464	1,687
1934.....	52	31,686	377	659	267	1,519	461	1,757
1935.....	52	31,878	369	652	269	1,572	480	1,826
1936.....	52	34,014	383	730	272	1,627	477	1,886
1937.....	52	35,477	414	775	270	1,709	509	1,977
1938.....	52	37,285	502	891	254	1,747	792	2,068
1939.....	55	39,146	539	931	286	1,800	804	2,239
1940.....	56	41,392	575	1,017	240	1,847	802	2,359
1941.....	55	40,593	607	1,063	247	1,905	814	2,562
1942.....	55	40,137	625	1,200	219	1,892	839	2,768
1943.....	57	41,620	642	1,301	197	1,889	846	2,914
1944.....	58	43,582	762	1,479	276	1,925	866	3,006
1945.....	(b)	(b)	(b)	(b)	(b)	(b)	883	3,153
1946.....	58	46,696	836	1,697	302	2,024	947	3,314
1947.....	59	52,388	1,135	2,133	332	2,107	983	3,380
1948.....	59	50,480	1,382	2,476	330	2,165	1,012	3,589
1949.....	60	53,558	1,671	3,065	398	2,213	1,053	3,808
1950.....	59	54,334	2,109	3,719	379	2,310	1,111	4,018
1951.....	60	57,401	2,694	4,503	452	2,411	1,172	4,199
1952.....	61	59,374	3,739	6,110	426	2,425	1,244	4,461
1953.....	62	61,681	4,673	7,442	498	2,534	1,202	4,585
1954.....	62	62,138	4,340	7,386	548	2,644	1,265	4,724
1955.....	63	64,310	5,524	8,819	516	2,612	1,348	4,884
1956.....	65	69,295	8,214	11,702	553	2,658	1,395	5,026
1957.....	65	73,249	11,370	15,449	543	2,594	1,469	5,122
1958.....	64	75,282	10,425	15,372	659	2,667	1,507	5,475
1959.....	65	79,426	10,260	15,638	712	2,643	1,601	5,583
1960.....	65	82,948	10,474	16,829	1,637	2,810	1,681	5,817
1961.....	66	87,386	10,155	17,414	1,846	2,833	1,739	6,123
1962.....	65	89,409	10,366	18,350	1,925	2,914	1,821	6,523
1963.....	65	94,144	10,007	19,307	2,604	2,799	1,883	6,879
1964.....	65	99,491	12,094	21,166	3,132	2,838	2,002	7,255
1965.....	65	105,098	14,171	24,084	3,061	2,752	2,080	7,699
1966.....	67	111,313	19,681	30,386	2,810	2,646	2,175	8,065
1967.....	65	117,693	22,138	34,532	2,866	2,494	2,282	8,467

(a) From 1959-60 covers all in-patients (certified and voluntary) in institutions. Prior to this covered only certified patients in two 'long-term' institutions.

(b) Year ended 30 June from 1946.

SOCIAL DEVELOPMENT

Social Welfare

Year	Public Relief	Children's Welfare	Pensions and Benefits Paid in South Australia by Commonwealth Government					Pensioners	
	Expenditure	Expenditure	Age and Invalid Pensions	War and Service Pensions	Child Endowment	National Health Services	Total (includes Other)	Age and Invalid	War and Service
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	Number	Number
1895-96	30.0	28.4							
1900-01	36.6	35.4							
1905-06	40.0	38.2							
1910-11	29.0	46.4						7,237	
1911-12	32.0	52.6						7,996	
1912-13	39.2	56.0						8,708	
1913-14	44.6	58.0						9,575	
1914-15	55.8	62.8						10,529	
1915-16	69.8	67.0	544	20				10,993	794
1916-17	76.0	74.6	704	230			1,052	11,301	4,272
1917-18	73.4	78.2	728	528			1,370	11,703	10,119
1918-19	72.4	79.4	882	822			1,816	11,782	14,959
1919-20	84.0	84.4	898	890			1,902	12,086	16,794
1920-21	101.8	95.0	910	1,028			2,060	12,320	14,663
1921-22	94.2	98.5	924	890			1,936	12,513	14,210
1922-23	86.2	97.1	942	876			1,936	12,759	14,341
1923-24	91.0	98.0	1,142	894			2,152	13,141	14,848
1924-25	101.4	98.6	1,174	932			2,224	13,519	15,542
1925-26	117.6	100.7	1,404	978			2,496	14,098	16,144
1926-27	129.8	102.8	1,454	1,006			2,574	14,666	16,589
1927-28	206.0	112.2	1,536	1,002			2,656	15,581	16,835
1928-29	298.2	109.8	1,648	986			2,746	16,774	16,581
1929-30	441.8	114.8	1,798	998			2,900	18,291	16,791
1930-31	154.8	103.7	1,982	994			3,074	20,602	16,653
1931-32	1,922.2	95.2	1,878	908			2,848	21,897	15,801
1932-33	1,500.6	90.9	1,826	844			2,726	21,461	15,517
1933-34	1,359.0	88.8	1,896	854			2,804	22,805	15,352
1934-35	1,277.0	87.8	2,068	892			3,016	24,517	15,248
1935-36	1,163.4	89.4	2,298	942			3,298	26,134	15,997
1936-37	1,086.6	89.4	2,522	1,036			3,622	27,308	16,340
1937-38	995.4	93.7	2,868	1,076			4,010	28,039	16,865
1938-39	989.6	94.0	2,836	1,098			4,008	28,857	16,680
1939-40	1,062.2	99.2	2,908	1,104			4,086	29,521	16,145
1940-41	389.9	101.4	3,032	1,088			4,192	29,642	15,424
1941-42	288.1	106.6	3,274	1,108	1,720		6,162	28,422	15,296
1942-43	232.8	113.3	3,628	1,274	1,810		7,076	27,423	16,333
1943-44	214.8	131.5	3,688	1,654	1,908		8,076	27,530	18,472
1944-45	215.4	143.1	3,624	1,838	1,870		8,276	27,507	22,071
1945-46	238.7	155.2	4,670	2,272	2,854	244	11,262	29,512	30,687
1946-47	250.7	197.8	5,102	2,692	3,196	856	13,212	32,387	35,117
1947-48	261.3	224.4	6,284	3,046	3,212	770	14,708	34,229	38,505
1948-49	279.3	255.6	7,170	3,718	4,024	1,054	17,442	35,470	42,931
1949-50	273.0	287.5	7,888	4,178	4,938	1,220	19,966	36,524	47,303
1950-51	279.0	337.6	8,600	5,214	7,564	2,122	25,216	36,582	51,589
1951-52	336.6	446.7	10,360	6,442	8,298	3,554	30,532	37,363	54,758
1952-53	445.6	466.8	12,616	7,130	9,540	4,154	25,878	39,700	58,591
1953-54	458.6	475.7	14,150	7,686	9,154	4,880	38,202	42,216	61,039
1954-55	487.2	491.2	15,310	8,778	9,428	5,824	41,560	45,147	63,767
1955-56	545.6	553.0	17,718	9,074	10,998	6,140	46,322	47,754	66,535
1956-57	686.4	494.0	19,244	9,572	10,500	6,710	48,926	50,209	68,291
1957-58	865.9	545.6	21,432	10,664	10,860	7,704	54,256	52,699	69,852
1958-59	770.4	674.6	23,150	10,860	12,618	9,868	60,460	55,181	71,331
1959-60	641.9	778.1	26,366	12,697	11,794	11,977	66,157	57,336	72,013
1960-61	691.4	914.8	28,537	13,722	14,092	12,811	73,594	60,483	72,695
1961-62	773.5	1,107.5	32,844	14,241	12,671	14,567	80,283	64,374	74,454
1962-63	693.1	1,129.9	33,951	14,867	12,861	16,066	83,393	64,156	73,239
1963-64	693.3	1,275.5	36,120	16,224	15,916	17,080	91,514	65,573	72,518
1964-65	704.3	1,516.8	38,509	16,006	16,563	18,948	96,362	66,798	70,678
1965-66	841.6	1,716.6	39,691	17,692	16,988	21,254	102,661	67,999	68,439
1966-67	996.3	1,914.4	43,720	16,776	19,063	23,100	111,394	70,521	66,624

NOTE: Unemployment relief payments paid by State Government and included in Public Relief to 1939-40. Unemployment benefits from 1945-46 paid by Commonwealth Government and included in Total Pensions and Benefits Paid.

EMPLOYMENT AND UNEMPLOYMENT

Year	Total Wage and Salary Earners (a)		Factory Employment (b)		Rural Employment (c)		Unemployment Benefits		Unemployed Registered (At 30 June)
	Males	Females	Males	Females	Males	Females	Average No. on Benefit	Amount Paid	
	'000	'000	'000	'000	'000	'000		\$'000	
1911			22.6	5.3					
1912			23.1	5.4					
1913			23.3	5.2					
1914			22.1	4.8					
1915			20.8	4.7					
1916-17			20.8	5.2					
1917-18			21.3	5.3					
1918-19			22.4	5.5					
1919-20			23.4	6.0					232
1920-21			24.5	5.9					688
1921-22			25.0	6.2					880
1922-23			28.0	6.7					443
1923-24			30.3	7.0	37.9	3.5			491
1924-25			31.2	7.1	38.4	3.3			718
1925-26			33.1	6.9	38.8	3.2			1,391
1926-27			34.1	7.0	38.8	2.7			1,900
1927-28			32.3	6.8	38.7	2.5			5,009
1928-29			30.4	6.4	38.8	2.2			5,825
1929-30			26.5	5.7	38.4	2.3			11,297
1930-31			19.3	4.6	38.9	2.6			23,588
1931-32			18.9	4.9	39.2	2.8			23,738
1932-33			20.9	5.4	39.7	3.1			20,516
1933-34			23.7	5.7	40.0	3.4			16,559
1934-35			27.3	6.2	41.4	3.1			13,111
1935-36			31.4	7.1	41.7	2.6			10,970
1936-37			33.4	7.3	42.3	3.0			8,033
1937-38			36.3	7.8	41.4	2.9			7,737
1938-39			35.4	8.0	41.3	2.5			8,574
1939-40			36.3	8.7	38.7	2.8			5,978
1940-41			40.1	10.8	n.a.	n.a.			1,745
1941-42			49.9	15.3	n.a.	n.a.			—
1942-43			52.8	20.0	29.6	5.1			—
1943-44			50.7	18.9	32.9	6.5			—
1944-45			49.1	16.4	33.6	6.2			—
1945-46			49.5	13.7	35.7	5.5	778	146.4	3,147
1946-47			56.7	14.0	38.1	5.0	200	40.2	1,310
1947-48			59.1	14.3	38.1	5.8	51	8.0	778
1948-49			60.9	14.9	38.1	5.5	14	1.2	654
1949-50			63.1	15.3	38.6	7.0	326	66.2	431
1950-51			66.8	16.2	36.9	6.1	6	0.8	406
1951-52			68.0	15.9	37.4	4.7	17	2.0	1,613
1952-53			67.1	13.4	38.3	5.0	841	264.0	2,343
1953-54	178.6	55.7	70.7	14.8	37.8	5.6	270	100.4	964
1954-55	183.9	60.1	73.7	15.9	37.6	5.0	66	24.8	1,207
1955-56	194.0	64.0	76.1	16.4	37.3	4.7	77	22.2	1,948
1956-57	193.3	64.1	75.5	16.4	36.4	3.9	681	227.4	3,363
1957-58	194.4	65.9	75.9	16.6	35.2	2.7	1,534	611.0	5,082
1958-59	201.1	68.4	77.4	16.7	35.0	3.6	1,641	724.8	3,958
1959-60	206.4	72.6	81.3	17.7	33.8	2.6	1,223	498.2	4,547
1960-61	207.5	72.3	81.9	18.1	34.0	2.3	1,610	685.6	9,035
1961-62	211.2	76.7	81.8	17.3	33.7	2.1	3,643	1,785.6	6,886
1962-63	219.6	80.9	86.7	18.6	33.3	1.9	2,244	1,184.6	6,479
1963-64	229.4	86.0	90.9	19.9	33.2	1.4	1,513	751.0	4,339
1964-65	239.9	93.4	94.7	21.5	32.6	1.3	800	390.4	3,553
1965-66	242.1	97.7	96.2	22.1	32.1	1.0	1,306	708.9	7,357
1966-67	243.2	99.7	96.1	22.1	31.3	0.8	3,150	1,653.2	8,484

(a) At June; includes all industries except rural, defence and female private domestics.

(b) Average employment including working proprietors during the year.

(c) Permanent employees only.

WAGES

Year	State Living Wage (a)		Commonwealth Basic Wage (a) (d)		Minimum Weekly Wage Rates (b)		Average Weekly Wage of Factory Employees (c)	
	Males	Females	Males	Females	Males	Females	Males	Females
	\$	\$	\$	\$	\$	\$	\$	\$
1911.....			5.10				4.38	1.59
1912.....			5.10				4.67	1.59
1913.....			5.10				4.90	1.69
1914.....			5.55		5.44	2.41	5.05	1.73
1915.....			6.35		5.47	2.45	4.93	1.63
1916.....	5.40		6.15		5.90	2.48	n.a.	n.a.
1917.....	5.40		5.85		6.31	2.78	5.58	1.80
1918.....	6.30	2.75	6.40		6.55	2.94	5.89	1.99
1919.....	6.30	3.00	7.00		7.04	3.32	6.07	2.15
1920.....	7.50	3.00	8.95		8.27	4.06	6.22	2.47
1921.....	7.95	3.50	7.95		8.94	4.52	7.31	2.88
1922.....	7.75	3.50	7.95		8.75	4.40	7.81	3.06
1923.....	7.85	3.50	8.55		9.08	4.63	7.80	3.19
1924.....	8.20	3.80	8.40		9.18	4.65	8.18	3.38
1925.....	8.55	3.95	8.60		9.43	4.88	8.38	3.52
1926.....	8.55	3.95	8.55		9.57	5.00	8.67	3.62
1927.....	8.55	3.95	8.80		9.66	4.99	9.18	3.84
1928.....	8.55	3.95	8.50		9.62	5.09	9.42	3.95
1929.....	8.55	3.95	8.85		9.72	5.13	9.33	4.00
1930.....	7.50	3.95	7.80		9.27	5.12	9.26	3.99
1931.....	6.30	3.15	5.81		7.50	4.39	8.43	3.61
1932.....	6.30	3.15	5.72		7.26	4.09	7.45	3.17
1933.....	6.30	3.15	5.96		7.34	4.10	7.32	3.10
1934.....	6.30	3.15	6.30		7.55	4.19	7.21	3.05
1935.....	6.60	3.15	6.70		7.79	4.24	7.38	3.12
1936.....	6.60	3.30	6.90		7.95	4.33	7.49	3.12
1937.....	7.40	3.65	7.40		8.58	4.68	7.89	3.20
1938.....	7.40	3.65	7.60		8.71	4.78	8.15	3.29
1939.....	7.80	3.80	7.70		9.41	4.96	8.49	3.32
1940.....	8.40	4.10	8.00		9.85	5.21	8.60	3.49
1941.....	8.70	4.35	8.40		10.58	5.54	9.32	3.89
1942.....	9.40	4.62	9.30		11.50	6.02	11.26	5.18
1943.....	9.40	4.62	9.40		11.61	6.12	12.07	6.05
1944.....	9.40	4.62	9.30		11.58	6.53	12.11	6.56
1945.....	9.40	4.62	9.30		11.60	6.72	11.74	6.34
1946.....	9.85	5.50	10.20		12.41	7.60	11.76	6.00
1947.....	10.60	5.90	10.60		13.78	8.80	12.74	6.52
1948.....	11.70	6.65	11.60		15.22	9.51	14.82	7.67
1949.....	12.50	6.85	12.60		16.44	10.10	16.99	8.76
1950.....	15.80	11.85	15.80	11.85	19.79	14.21	18.74	9.90
1951.....	19.50	14.60	19.50	14.60	23.60	17.02	22.43	12.38
1952.....	22.90	17.15	22.90	17.15	27.08	19.68	27.55	15.60
1953.....	23.10	17.30	23.10	17.30	27.35	19.91	30.00	17.38
1954.....	23.10	17.30	23.10	17.30	28.16	19.99	31.71	17.92
1955.....	23.10	17.30	23.10	17.30	28.50	20.18	33.97	18.35
1956.....	24.10	18.05	24.10	18.05	29.63	20.92	35.59	19.11
1957.....	25.10	18.80	25.10	18.80	30.69	21.95	36.67	19.52
1958.....	25.60	19.20	25.60	19.20	31.24	22.38	37.32	20.63
1959.....	27.10	20.30	27.10	20.30	33.99	23.92	38.17	20.90
1960.....	27.10	20.30	27.10	20.30	34.22	24.29	41.85	22.13
1961.....	28.30	21.20	28.30	21.20	35.46	25.20	43.28	22.78
1962.....	28.30	21.20	28.30	21.20	35.65	25.23	43.86	23.47
1963.....	28.30	21.20	28.30	21.20	36.40	25.52	45.71	23.86
1964.....	30.30	22.70	30.30	22.70	38.69	27.29	47.25	25.23
1965.....	30.30	22.70	30.30	22.70	39.48	27.75	51.72	26.39
1966.....	32.30	24.20	32.30	24.20	41.75	29.42	52.30	27.31
1967.....	33.30	25.20	(d)	(d)	43.78	31.30	55.39	28.89

(a) At end of year.

(b) Adult rates, at end of year, for all industries excluding rural.

(c) Excludes drawings of working proprietors.

(d) Superseded by total wage from July 1967.

PRICES

Year	Retail Price Indexes: Adelaide						Agricultural Produce at Principal Markets		
	'C' Series (a)			Consumer (b)			Wheat (Per Bushel) (c)	Barley (Per Bushel)	Wool (Per Lb)
	Food and Groceries	Rent	All Groups	Food	Housing	All Groups			
1901	575						\$	\$	cents
1906	549								
1911	570						0.346	0.375	7.07
1912	645						0.379	0.400	6.36
1913	626						0.358	0.375	7.40
1914	683	611	699				0.367	0.250	7.21
1915	858	574	780				0.725	0.550	6.97
1916	835	573	798				0.475	0.325	8.97
1917	805	606	832				0.475	0.367	11.39
1918	862	656	887				0.475	0.442	11.96
1919	1,012	707	1,018				0.550	0.542	12.14
1920	1,225	783	1,164				0.900	0.600	11.76
1921	941	819	989				0.800	0.442	11.22
1922	937	852	954				0.504	0.383	9.96
1923	1,019	887	1,008				0.492	0.375	14.80
1924	1,002	942	1,015				0.467	0.333	18.33
1925	1,029	963	1,028				0.608	0.542	19.14
1926	1,045	927	1,026				0.621	0.400	12.45
1927	1,030	942	1,018				0.529	0.363	12.35
1928	993	1,022	1,027				0.544	0.496	14.47
1929	1,055	986	1,037				0.473	0.377	12.47
1930	937	916	952				0.433	0.308	7.57
1931	789	755	837				0.229	0.225	5.68
1932	761	691	802				0.317	0.296	5.73
1933	731	694	789				0.281	0.223	6.10
1934	767	700	806				0.263	0.242	11.37
1935	780	736	820				0.304	0.271	6.82
1936	798	795	839				0.383	0.223	9.93
1937	826	832	859				0.515	0.406	11.38
1938	861	868	888				0.356	0.352	9.40
1939	897	888	906				0.227	0.271	7.58
1940	900	892	936				0.406	0.354	9.95
1941	905	893	988				0.447	0.486	9.87
1942	1,046	893	1,075				0.456	0.332	9.79
1943	1,003	893	1,102				0.531	0.450	11.37
1944	993	892	1,098				0.618	0.432	11.32
1945	1,002	892	1,102				0.563	0.546	11.21
1946	1,006	894	1,120				0.802	0.633	11.24
1947	1,067	897	1,165				0.993	0.892	18.37
1948	1,230	903	1,277				1.543	1.685	29.90
1949	1,351	912	1,393	56.1	68.7	61.6	1.242	0.838	36.78
1950	1,494	929	1,521	60.7	71.6	66.2	1.442	1.127	48.14
1951	1,931	949	1,833	70.1	75.9	74.7	1.463	1.169	107.63
1952	2,380	1,055	2,159	90.9	85.0	91.4	1.650	1.627	53.77
1953	2,444	1,155	2,246	100.0	100.0	100.0	1.681	1.613	62.48
1954	2,525	1,174	2,277	103.5	109.9	102.3	1.452	1.017	62.68
1955	2,657	1,247	2,354	106.1	113.0	103.5	1.335	1.360	54.73
1956	2,871	1,358	2,466	110.9	120.8	106.9	1.350	1.060	46.98
1957	2,710	1,468	2,463	114.7	129.2	111.1	1.450	1.100	61.52
1958	2,768	1,592	2,536	111.8	133.9	111.9	1.456	1.188	46.76
1959	2,998	1,674	2,647	117.5	137.1	114.5	1.402	1.121	38.03
1960				123.1	140.0	118.0	1.465	1.010	44.85
1961				132.2	148.7	122.9	1.507	0.916	40.14
1962				127.6	153.5	122.5	1.516	1.121	41.59
1963	Not calculated			126.0	154.9	122.1	1.468	1.100	44.87
1964				129.1	158.5	123.5	1.433	1.114	54.22
1965				136.6	164.6	128.6	1.412	1.153	44.14
1966				141.2	171.1	132.7	1.501	1.176	46.71
1967				145.5	178.8	136.9	1.488	1.192	45.22

(a) Base: Average all groups six capital cities 1923 to 1927 = 1,000.

(b) Base of each group 1953-54 = 100.

(c) Bulk wheat from 1962, previously bagged; price of bagged wheat in 1967 was \$1.583.

METEOROLOGY

Year	Rainfall				Evapor- ation	Sunshine	Temperature				
	Agricultural Areas (a)		Adelaide				Adelaide				
	Wheat- growing Season (b)	Total	Days of Rain	Total			Total	Total	Extreme Maxi- mum	Extreme Mini- mum	Mean
Inches	Inches	Days	Inches	Inches	Hours	°F	°F	°F			
1841			93	17.96							
1846			114	26.89							
1851			128	30.95							
1856			118	24.93							
1861	20.66	27.83	147	24.04			109.0	35.0	63.4		
1866	19.89	21.86	116	20.11			109.5	37.2	63.8		
1871	18.53	23.55	137	23.25	52.94		111.4	37.4	64.0		
1876	13.66	15.74	110	13.43	60.95		114.2	32.5	62.5		
1881	15.07	18.13	135	18.02	55.97		105.8	35.2	62.1		
1886	15.20	17.36	141	14.42	55.93	2,588.0	112.4	35.6	62.7		
1891	13.34	16.13	113	14.01	52.03	2,752.7	102.7	36.2	62.2		
1896	12.32	16.92	121	15.17	52.65	2,643.9	111.2	34.4	63.4		
1901	16.11	18.26	124	18.01	58.81	2,522.6	110.0	35.2	63.5		
1906	16.43	19.49	127	26.53	55.13	2,366.4	113.1	36.1	63.7		
1911	10.35	14.83	127	16.03	48.14	2,415.0	102.8	34.9	62.9		
1916	19.18	21.18	142	28.16	55.53	2,511.9	107.5	38.3	62.0		
1921	13.43	19.72	100	22.64	58.19	2,658.0	109.6	37.0	64.7		
1926	13.65	15.11	116	22.20	57.99	2,688.6	104.1	37.4	63.1		
1927	9.04	11.39	101	16.92	59.67	2,670.8	110.0	36.1	63.0		
1928	8.95	12.50	107	19.43	60.44	2,750.2	108.7	35.4	63.4		
1929	8.79	12.05	119	17.51	59.82	2,544.9	104.2	35.0	62.2		
1930	11.06	12.59	116	18.65	66.24	2,744.1	112.4	36.9	64.9		
1931	12.76	14.38	145	22.26	59.74	2,534.5	114.6	37.6	62.3		
1932	14.61	17.80	141	25.04	52.84	2,351.9	110.3	36.8	62.6		
1933	11.40	13.79	130	22.12	55.52	2,487.7	107.7	36.7	62.2		
1934	11.67	13.44	115	20.24	61.63	2,528.3	110.5	37.7	64.4		
1935	11.73	14.80	140	23.45	57.69	2,411.2	107.8	37.9	62.9		
1936	9.44	13.39	123	19.34	60.03	2,430.8	103.7	37.1	62.8		
1937	11.94	16.62	128	23.01	62.62	2,294.1	105.9	37.7	63.3		
1938	9.62	12.95	119	19.26	66.18	2,425.9	106.6	36.0	63.2		
1939	13.45	16.88	139	23.29	65.99	2,521.2	117.7	34.7	63.3		
1940	8.19	10.53	116	16.16	66.86	2,564.6	110.1	36.5	62.6		
1941	11.80	17.61	126	22.56	63.14	2,471.8	110.0	37.9	62.5		
1942	16.51	18.89	133	25.44	65.91	2,422.2	112.5	38.2	63.2		
1943	10.71	13.47	135	17.84	62.81	2,416.7	112.2	36.8	61.6		
1944	9.16	11.18	114	17.13	64.29	2,333.7	103.4	32.5	62.3		
1945	11.19	14.10	105	17.85	59.94	2,431.2	107.0	34.0	62.0		
1946	10.32	20.29	135	22.59	54.51	2,301.0	106.4	35.6	61.3		
1947	13.87	18.64	145	21.89	61.93	2,311.3	105.3	38.0	62.5		
1948	12.51	14.06	122	21.40	63.85	2,401.7	110.1	37.2	61.3		
1949	12.48	14.71	119	18.23	58.74	2,317.7	100.4	36.6	60.5		
1950	11.29	14.59	91	16.06	65.25	2,677.5	104.0	38.4	62.6		
1951	16.94	18.88	135	25.44	64.78	2,338.7	104.9	36.6	62.5		
1952	16.27	18.63	128	19.99	59.97	2,459.2	105.5	34.9	60.4		
1953	12.92	15.87	121	20.00	67.40	2,584.7	106.4	39.0	61.9		
1954	11.24	13.83	109	16.73	66.13	2,502.6	103.0	38.1	62.0		
1955	15.71	19.36	134	24.58	66.03	2,396.1	109.0	38.4	62.1		
1956	18.18	20.46	154	27.24	64.50	2,378.6	100.9	39.4	61.6		
1957	8.67	10.06	110	16.71	68.34	2,672.5	105.7	38.2	62.2		
1958	14.21	16.25	121	17.57	65.81	2,454.7	102.2	34.2	61.6		
1959	6.28	9.53	88	11.32	68.89	2,591.9	110.0	37.5	63.2		
1960	15.59	18.94	129	23.07	63.22	2,355.6	107.2	36.4	61.3		
1961	11.99	13.45	122	14.91	n.a.	2,586.3	105.5	37.2	64.0		
1962	10.24	13.59	125	17.96	n.a.	2,559.1	108.8	39.5	63.0		
1963	14.93	16.95	118	24.43	63.76	2,369.1	103.8	38.0	62.6		
1964	15.85	17.81	135	21.89	59.32	2,199.5	104.5	36.1	61.3		
1965	10.51	11.52	111	13.34	64.89	2,439.1	101.9	36.7	63.2		
1966	11.09	16.67	123	19.49	63.45	2,431.6	105.3	38.0	62.4		
1967	6.37	8.70	89	10.11	76.32	2,841.3	102.2	39.0	71.3		

(a) From 1905 rainfall is the weighted average over agricultural areas, previously average of 50 selected stations. (b) Eight months April to November inclusive.

LAND TENURE AND CULTIVATION

Year	Land Tenure			Rural Holdings	Area of Rural Holdings	Area under Crop		Area of Pastures Top-dressed	Area Under Irrigation
	Alienated and Set Apart	Under Lease				Manured	Total		
		Pastoral	Total						
	'000 Acres	'000 Acres	'000 Acres	No.	'000 Acres	'000 Acres	'000 Acres	'000 Acres	'000 Acres
1836-37	61								
1841-42	307						7		
1846-47	440						33		
1851-52	707	9,799					81		
1856-57	1,580	14,620					203		
1861-62	2,381	29,457					401		
1866-67	3,426	26,785					604		
1871-72	4,622	45,376					838		
1876-77	6,839	89,385					1,229		
1881-82	9,869	119,846					2,156		
1886-87	9,528	126,541					2,285		
1891-92	8,594	97,388					1,928		
1896-97	8,671	112,186					2,052		
1901-02	8,089	68,916	85,577			827	2,237		
1906-07	8,947	76,686	94,970			1,555	2,157		
1911-12	11,654	91,547	111,002	27,120	116,168	2,495	2,965		
1916-17	13,882	97,159	115,638	29,278	129,668	2,857	3,627		
1921-22	14,117	102,842	120,663	29,693	134,206	2,957	3,379		22.6
1922-23	14,210	99,594	117,686	29,942	131,689	3,088	3,575		26.3
1923-24	14,453	109,082	127,246	29,850	141,502	3,099	3,563		27.9
1924-25	14,457	108,797	126,694	29,776	139,438	3,100	3,557	67	35.3
1925-26	14,696	102,872	121,209	29,884	135,510	3,196	3,584	124	36.4
1926-27	14,993	101,962	120,830	29,654	135,580	3,534	3,884	162	35.4
1927-28	15,246	101,424	120,168	29,675	135,640	3,815	4,192	210	38.4
1928-29	15,698	100,425	119,349	29,953	134,782	4,251	4,660	250	39.2
1929-30	16,060	98,062	116,824	30,246	132,675	4,600	4,967	302	40.0
1930-31	16,272	94,176	113,117	30,449	129,569	4,921	5,426	215	43.5
1931-32	16,306	93,854	112,842	30,648	129,369	4,214	5,220	139	42.8
1932-33	16,253	97,412	116,281	30,724	132,673	4,408	5,167	151	42.6
1933-34	16,200	99,659	118,593	30,986	134,847	4,386	5,079	212	42.9
1934-35	16,086	102,084	121,506	31,123	137,918	3,950	4,629	361	39.6
1935-36	15,909	102,513	122,120	31,262	138,330	3,905	4,463	536	42.7
1936-37	15,757	101,091	120,871	31,321	136,978	4,001	4,578	904	42.3
1937-38	15,451	107,017	127,013	31,277	142,836	4,229	4,736	997	44.3
1938-39	15,297	109,304	129,140	31,280	144,682	4,281	4,724	1,095	43.6
1939-40	15,132	109,920	129,811	31,244	145,979	4,001	4,542	1,075	44.5
1940-41	14,766	109,551	129,663	30,961	144,207	3,777	4,254	1,049	46.3
1941-42	14,554	114,034	134,483	30,565	145,634	3,480	3,975	1,055	45.8
1942-43	14,157	110,879	131,560	27,934	145,443	2,625	3,437	945	n.a.
1943-44	14,023	110,808	131,899	27,826	144,526	1,926	2,761	705	n.a.
1944-45	13,936	113,157	134,398	27,867	137,486	2,289	3,179	725	n.a.
1945-46	13,914	113,617	135,010	27,635	142,505	3,036	3,824	854	42.2
1946-47	13,973	114,162	135,602	28,040	146,173	3,377	3,884	1,112	46.1
1947-48	14,067	114,201	135,503	27,597	142,393	3,377	3,851	1,391	42.6
1948-49	14,142	115,324	136,548	28,110	146,723	3,279	3,757	1,741	48.2
1949-50	14,473	115,630	137,132	27,900	146,563	3,122	3,617	1,792	49.1
1950-51	14,528	115,672	136,956	28,248	151,731	3,252	3,676	1,859	79.1
1951-52	14,447	115,795	137,811	28,698	151,785	3,173	3,696	2,150	58.4
1952-53	14,557	115,843	137,722	28,860	152,689	3,139	3,581	2,322	57.1
1953-54	14,670	118,059	140,008	29,220	150,315	3,336	3,778	2,826	62.1
1954-55	14,791	114,505	136,340	28,092	149,379	3,470	3,895	3,142	69.5
1955-56	14,353	117,085	139,640	28,585	149,965	3,405	3,972	3,499	71.0
1956-57	15,206	117,295	139,727	27,936	149,931	3,400	3,979	3,677	66.1
1957-58	15,342	115,715	138,370	27,971	152,045	3,463	3,907	4,005	81.2
1958-59	15,447	115,111	138,304	28,105	152,312	3,692	4,148	3,716	85.1
1959-60	15,533	121,772	145,377	28,527	155,437	3,679	4,059	3,471	100.9
1960-61	15,681	122,258	145,752	28,711	156,456	4,326	4,966	3,300	102.0
1961-62	15,751	122,122	145,796	28,886	156,897	4,063	4,509	3,583	108.4
1962-63	15,864	123,123	146,807	28,922	156,697	4,415	4,932	3,750	112.8
1963-64	15,961	122,718	146,382	28,711	158,905	4,788	5,380	3,993	117.9
1964-65	16,065	124,043	147,661	28,754	156,954	4,775	5,290	4,714	123.1
1965-66	16,111	126,830	150,422	28,759	159,394	4,869	5,293	5,093	128.8
1966-67	16,523	125,689	149,192	28,957	161,510	5,123	5,737	5,237	138.8

RURAL PRODUCTION

Crop Areas and Yields

Year	Cereals for Grain						Hay (a)	Orchards (b) (c)	Vineyards (b)
	Wheat		Barley		Oats				
	Area	Yield per Acre	Area	Yield per Acre	Area	Yield per Acre			
	'000 Acres	Bush	'000 Acres	Bush	'000 Acres	Bush		'000 Acres	
1841-42..	4	20.77	1	20.00	1	25.00			
1846-47..	26	20.00	3	30.00	2	20.00			0.1
1851-52..	54	12.65	5	16.49	3	21.79			0.3
1856-57..	162	25.00	8	21.18	3	20.00	23	1.0	0.8
1861-62..	311	10.98	11	15.81	2	20.24	63	1.8	3.9
1866-67..	458	14.34	12	20.13	4	22.29	111	2.2	6.4
1871-72..	693	5.73	17	9.53	4	10.85	98	2.8	5.5
1876-77..	1,084	5.40	10	10.64	3	10.65	92	3.3	4.6
1881-82..	1,769	4.57	12	11.48	3	10.66	333	4.4	4.2
1886-87 (d)	1,970	5.50	17	13.04	8	12.48	317	n.a.	5.3
1891-92..	1,552	4.15	11	9.35	13	6.40	304	8.9	12.3
1896-97..	1,693	1.66	14	7.44	40	4.72	339	11.7	18.3
1901-02..	1,743	4.60	16	15.68	35	13.54	370	16.3	20.9
1906-07..	1,686	10.36	28	17.47	57	15.72	298	18.2	22.6
1911-12..	2,191	9.29	41	17.25	108	12.51	521	23.2	24.0
1916-17..	2,778	16.46	104	16.74	152	12.13	483	28.8	29.2
1921-22..	2,384	10.46	171	19.19	125	10.37	559	32.3	41.4
1926-27..	2,768	12.84	257	18.05	152	11.26	496	31.6	50.3
1927-28..	2,941	8.18	219	13.67	197	7.00	533	31.0	50.7
1928-29..	3,446	7.79	247	18.53	207	8.40	498	30.8	51.8
1929-30..	3,646	6.40	305	15.25	278	5.63	544	30.1	52.3
1930-31..	4,181	8.34	252	15.72	218	9.52	613	29.6	52.2
1931-32..	4,071	11.81	242	18.87	206	11.08	539	29.1	52.5
1932-33..	4,067	10.43	314	19.31	174	10.27	461	29.1	52.5
1933-34..	3,822	9.26	307	17.09	265	7.88	507	28.9	52.9
1934-35..	3,188	8.61	317	17.94	367	6.57	561	29.2	53.4
1935-36..	2,989	10.58	394	16.49	300	7.94	566	29.1	54.2
1936-37..	3,058	9.39	305	13.99	415	5.70	539	29.8	56.1
1937-38..	3,162	13.73	411	21.02	332	8.91	562	29.9	57.4
1938-39..	3,080	10.28	457	16.50	267	9.00	519	28.9	58.0
1939-40..	2,735	15.02	504	19.78	349	11.64	532	29.1	58.2
1940-41..	2,560	6.97	471	10.14	473	3.87	404	29.4	58.4
1941-42..	2,326	13.12	478	24.49	291	13.04	558	29.5	58.0
1942-43..	2,009	18.18	298	20.20	263	12.81	426	29.5	58.2
1943-44..	1,534	13.49	261	19.34	224	10.22	312	25.5	57.3
1944-45..	1,623	5.70	360	8.85	334	3.94	428	26.5	56.9
1945-46..	2,165	9.72	442	17.12	370	8.60	484	27.2	57.4
1946-47..	2,519	11.08	502	16.78	252	11.01	329	28.1	58.2
1947-48..	2,375	13.70	562	27.32	309	17.47	296	28.3	58.9
1948-49..	2,063	12.67	698	17.35	287	9.23	234	29.7	59.8
1949-50..	1,896	14.95	694	18.34	261	13.25	295	26.9	60.3
1950-51..	1,848	16.74	765	21.87	271	13.02	261	28.7	62.0
1951-52..	1,613	16.92	832	20.23	387	13.95	257	29.4	61.2
1952-53..	1,544	21.97	938	27.63	369	18.05	214	28.6	60.6
1953-54..	1,528	19.90	1,122	25.40	280	15.42	262	29.8	62.1
1954-55..	1,689	18.63	1,020	18.02	340	13.27	257	30.5	60.6
1955-56..	1,609	17.96	1,042	23.61	425	17.13	326	33.0	59.9
1956-57..	1,438	21.85	1,222	27.83	427	19.47	299	34.0	57.4
1957-58..	1,331	11.20	1,212	14.48	427	8.01	291	35.3	57.4
1958-59..	1,407	22.76	1,332	28.27	481	24.93	420	37.2	56.7
1959-60..	1,549	7.70	1,290	9.19	505	4.95	245	37.4	56.9
1960-61..	1,969	23.56	1,556	27.15	512	22.41	393	37.7	56.9
1961-62..	2,229	15.19	1,271	16.75	324	13.57	209	38.5	57.8
1962-63..	2,595	14.77	1,053	17.10	416	13.88	287	40.4	58.3
1963-64..	2,802	19.26	1,123	21.67	501	18.27	358	41.7	58.7
1964-65..	2,727	19.37	1,095	24.60	444	20.23	314	43.0	58.9
1965-66..	2,745	14.56	1,098	16.86	455	12.37	299	44.0	58.7
1966-67..	2,960	18.18	1,107	21.41	509	20.19	482	44.2	57.1

(a) Wheat only to 1906-07, thence all kinds.

(b) Bearing and non-bearing.

(c) From 1949-50, private orchards and those no longer worked have been omitted.

(d) Statistics not collected and particulars estimated.

STATISTICAL SUMMARY

RURAL PRODUCTION

Livestock and Associated Produce; Farm Machinery

Year	Livestock Numbers				Wool Production	Milk Production	Slaughtering		Farm Machinery		
	Sheep	Cattle		Horses			Sheep and Lambs	Cattle and Calves	Tractors	Shearing Machines	Milking Machines
		Total	Dairy Cows								
	'000	'000	'000	'000	'000 Lb	'000 Gal	'000	'000	No.	No.	No.
1841-42 ..	250	21		1							
1846-47 ..	681	57		2							
1851-52 ..	1,250	100		7							
1856-57 ..	1,962	273		22							
1861-62 ..	3,038	265		53	13,164						
1866-67 ..	3,912	124		71	19,740						
1871-72 ..	4,412	143		78	25,909						
1876-77 ..	6,133	219		107	42,445						
1881-82 ..	6,804	294		157	48,762						
1886-87 ..	6,542	285		166	50,561						
1891-92 ..	7,646	399	80	189	57,613						
1896-97 ..	6,324	337	84	180	51,936						
1901-02 ..	5,012	225	75	165	44,553						
1906-07 ..	6,625	326	98	207	48,928						
1911-12 ..	6,172	394	122	260	60,345	28,000	1,276	87			
1916-17 ..	5,091	289	114	257	37,534	30,000	686	62			
1921-22 ..	6,257	419	166	268	57,764	41,400	1,208	95			
1922-23 ..	6,305	426	170	268	58,699	42,000	1,291	123			
1923-24 ..	6,597	413	169	264	57,882	47,600	956	140			
1924-25 ..	6,359	400	145	255	62,439	45,400	933	151	882		
1925-26 ..	6,810	373	136	244	69,007	41,400	1,028	155	1,252		
1926-27 ..	7,284	340	127	234	72,365	40,400	1,091	143	1,820		420
1927-28 ..	7,542	316	118	224	78,370	37,900	1,210	142	2,503		389
1928-29 ..	7,080	263	109	206	74,616	35,700	1,263	128	2,979		370
1929-30 ..	6,186	205	104	189	67,301	34,800	1,243	118	3,730		356
1930-31 ..	5,981	219	110	184	63,479	39,000	1,309	90	3,991		367
1931-32 ..	6,609	265	128	185	67,021	50,000	1,379	81	3,992		380
1932-33 ..	7,713	313	149	190	75,728	58,500	1,279	89	4,067		391
1933-34 ..	7,941	353	164	197	79,289	54,400	1,495	104	4,072		389
1934-35 ..	7,885	346	170	199	77,791	53,400	1,591	140	4,122		378
1935-36 ..	7,946	335	174	197	81,709	59,000	1,643	154	4,292		354
1936-37 ..	7,905	328	170	201	76,604	63,700	1,697	166	4,563		409
1937-38 ..	8,904	324	165	197	86,606	69,100	1,589	167	5,312		532
1938-39 ..	9,937	319	165	196	102,888	72,500	2,007	160	5,969		684
1939-40 ..	9,941	351	173	190	105,266	77,300	2,094	151	6,154		829
1940-41 ..	10,263	377	179	182	106,647	78,800	2,164	157	6,351		1,090
1941-42 ..	10,246	399	179	171	105,124	78,900	2,070	154	n.a.		n.a.
1942-43 ..	10,371	424	185	165	108,637	78,600	2,272	171	6,705	2,976	1,659
1943-44 ..	10,360	415	188	154	115,464	78,200	2,480	189	7,064	3,297	1,963
1944-45 ..	8,474	391	187	133	106,708	72,200	3,065	175	8,044	3,770	2,206
1945-46 ..	6,787	374	176	116	73,604	79,400	2,017	148	9,211	3,978	2,349
1946-47 ..	7,959	424	187	109	93,020	93,900	1,662	146	9,456	4,306	2,839
1947-48 ..	9,055	445	197	101	116,450	92,500	1,665	148	9,664	4,932	3,238
1948-49 ..	9,366	461	203	94	114,905	91,300	2,011	189	11,271	5,817	3,665
1949-50 ..	9,477	464	203	83	121,249	89,400	2,317	201	13,709	6,846	4,198
1950-51 ..	10,167	433	184	71	125,384	83,500	2,022	218	16,128	8,134	4,590
1951-52 ..	11,470	437	176	63	135,484	86,500	1,547	216	18,184	9,054	4,909
1952-53 ..	12,037	483	183	57	158,658	84,200	2,353	187	19,750	9,733	5,418
1953-54 ..	11,838	491	192	52	145,509	85,000	2,637	220	20,842	10,302	5,876
1954-55 ..	12,817	524	199	49	155,761	90,700	2,799	233	23,110	11,452	6,363
1955-56 ..	13,585	566	195	44	173,697	90,300	2,358	227	24,345	12,134	6,920
1956-57 ..	14,984	622	195	41	188,808	89,900	2,329	252	26,012	12,690	7,208
1957-58 ..	15,237	597	191	36	185,843	80,600	3,278	283	27,288	13,280	7,344
1958-59 ..	15,634	576	188	33	186,842	82,100	3,145	287	28,532	13,778	7,537
1959-60 ..	14,025	500	170	30	198,289	78,600	3,899	238	28,965	13,973	7,575
1960-61 ..	14,952	561	170	27	177,413	87,000	2,784	174	30,674	14,317	7,589
1961-62 ..	16,415	659	183	26	206,984	95,500	3,140	201	31,788	14,532	7,707
1962-63 ..	15,737	679	190	25	207,344	95,400	3,467	254	31,671	14,595	7,553
1963-64 ..	16,402	694	185	(a)	210,500	97,500	2,996	279	33,231	14,885	7,438
1964-65 ..	17,289	697	182	(a)	215,736	102,300	3,100	275	34,164	15,172	7,328
1965-66 ..	17,993	690	176	(a)	229,633	98,400	3,474	277	33,998	15,386	7,040
1966-67 ..	17,864	687	170	16	237,493	98,700	3,358	265	35,829	15,392	6,634

(a) Not collected.

MINING AND FACTORY PRODUCTION

Year	Mining				Factories		
	Principal Minerals Produced			Value of Production (a)	Number of Establishments	Value of Land and Buildings, Plant and Machinery	Value of Production
	Copper Ore and Concentrate	Coal	Iron Ore				
	Tons	'000 Tons	'000 Tons	\$'000		\$'000	\$'000
1846.....	6,461			285			
1851.....	7,717			622			
1856.....	11,791			825			
1861.....	11,259			920			
1866.....	23,287			1,657			
1871.....	26,522			1,347			
1876.....	28,145			1,205			
1881.....	25,462			842			
1886.....	18,417			554			
1891.....	16,627		7	551			
1896.....	4,951		—	496			
1901.....	8,605		—	1,079			
1906.....	8,208		75	1,652			
1911.....	5,922		42	900	1,314	11,159	9,148
1916.....	7,279		188	2,504	1,266	12,782	9,748
1921.....	1,532		507	2,086	1,438	17,938	14,556
1922.....	1,185		51	477	1,432	9,607	23,858
1923.....	3,523		384	1,062	1,609	10,843	26,904
1924.....	405		580	1,176	1,698	13,242	29,651
1925.....	570		587	1,342	1,711	14,412	32,144
1926.....	231		584	2,924	1,791	31,685	25,348
1927.....	201		722	3,254	1,807	33,900	27,311
1928.....	192		618	2,755	1,860	36,415	26,975
1929.....	277		848	3,270	1,844	38,633	25,137
1930.....	99		928	2,882	1,814	38,447	21,953
1931.....	22		289	1,297	1,644	37,203	15,510
1932.....	—		538	1,885	1,662	35,314	13,924
1933.....	72		721	2,456	1,710	34,733	15,709
1934.....	207		1,244	3,724	1,733	34,302	17,283
1935.....	256		1,869	5,113	1,803	34,483	19,114
1936.....	451		1,887	5,241	1,895	35,098	23,339
1937.....	340		1,866	5,244	1,916	34,528	24,543
1938.....	254		2,245	6,304	1,980	35,564	27,640
1939.....	110		2,572	7,294	2,067	36,921	27,358
1940.....	308		2,313	7,077	2,265	41,291	28,807
1941.....	605		2,240	7,074	2,230	51,744	33,832
1942.....	392	2	2,122	6,342	2,167	66,948	49,132
1943.....	102	—	2,183	6,287	2,134	70,643	56,732
1944.....	135	35	2,029	6,085	2,149	72,089	56,823
1945.....	134	41	1,520	4,917	2,182	69,665	54,530
1946.....	—	135	1,818	6,101	2,395	74,930	51,203
1947.....	—	193	2,146	7,253	2,707	74,136	62,133
1948.....	4	240	2,035	7,514	2,865	81,861	77,339
1949.....	3	345	1,448	6,236	2,927	90,019	87,443
1950.....	—	261	2,350	8,857	3,046	98,436	104,706
1951.....	2	388	2,401	9,875	3,141	100,123	135,618
1952.....	5	418	2,684	12,094	3,245	121,367	166,493
1953.....	2	448	2,591	12,406	3,339	144,029	178,378
1954.....	3	495	2,867	17,160	3,577	166,735	200,443
1955.....	—	455	3,044	(b) 41,419	3,750	188,555	222,055
1956.....	12	481	3,587	47,853	3,908	223,900	241,872
1957.....	39	609	3,389	46,352	4,063	254,380	253,532
1958.....	52	755	3,353	47,076	4,168	280,840	266,570
1959.....	66	690	3,423	49,332	4,235	302,055	279,620
1960.....	30	885	3,437	50,870	4,684	351,745	325,947
1961.....	8	1,115	3,991	58,242	5,042	401,658	340,123
1962.....	4	1,392	3,510	53,958	5,519	449,600	347,828
1963.....	16	1,512	4,242	62,431	5,766	506,571	379,142
1964.....	54	1,736	4,367	67,597	5,826	560,908	427,356
1965.....	114	2,016	4,392	67,863	5,887	645,469	498,588
1966.....	141	2,021	4,799	72,342	6,065	699,989	527,477

(a) Value at site of production. Quarries included from 1916.

(b) Comparability affected by revaluation of iron ore.

GROSS VALUE OF RURAL PRODUCTION

Year	Agricultural				Pastoral		Dairying	Total Rural Production
	Wheat	Barley	Vine and Orchard Fruit	Total	Wool (a)	Total		
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1908-09	8,486	258	1,274	14,172	3,858	5,576	1,511	22,080
1909-10	9,635	239	1,330	14,761	4,394	6,231	1,492	23,365
1910-11	8,419	174	1,572	14,186	4,514	7,087	1,715	24,004
1911-12	7,717	254	1,599	14,965	3,836	5,789	1,693	23,535
1912-13	7,703	466	1,871	15,817	4,232	6,260	1,643	24,841
1913-14	6,210	324	1,632	12,400	3,990	5,865	1,705	21,136
1914-15	2,557	247	1,155	8,203	2,878	3,462	1,601	14,342
1915-16	16,214	521	2,244	24,813	3,260	2,441	1,809	30,117
1916-17	21,729	599	1,653	27,677	4,274	11,200	2,759	42,909
1917-18	13,629	683	2,416	20,583	5,948	12,269	2,874	37,117
1918-19	12,615	1,262	2,859	22,692	7,258	11,774	3,093	39,009
1919-20	13,482	1,451	3,530	27,456	7,332	10,449	3,413	43,193
1920-21	27,407	1,681	3,811	39,963	5,874	11,248	4,666	58,287
1921-22	12,577	1,227	3,491	23,221	5,752	8,296	3,678	37,273
1922-23	14,152	1,364	3,768	26,292	8,688	11,792	3,959	44,226
1923-24	16,124	1,065	3,962	28,312	10,612	15,479	4,970	50,961
1924-25	18,572	1,648	4,399	30,636	11,952	16,276	4,305	53,609
1925-26	17,979	1,656	3,352	28,307	8,591	12,930	4,171	47,629
1926-27	19,052	1,685	4,082	30,181	8,937	12,140	3,895	48,357
1927-28	13,247	1,497	3,394	23,257	11,338	14,584	4,125	44,464
1928-29	12,845	1,737	3,909	23,880	9,308	12,472	3,810	42,375
1929-30	10,243	1,448	3,819	21,059	5,098	8,183	3,892	35,055
1930-31	8,091	893	3,241	15,708	3,608	5,801	3,121	26,335
1931-32	17,163	1,363	3,442	25,291	3,843	5,452	3,140	35,444
1932-33	13,097	1,371	3,463	20,221	4,619	5,834	3,654	32,030
1933-34	10,933	1,280	3,618	19,533	9,013	10,608	3,108	34,776
1934-35	10,318	1,553	3,882	19,965	5,309	7,706	3,091	32,489
1935-36	13,135	1,457	3,953	22,863	8,116	10,885	3,797	39,126
1936-37	14,955	1,766	4,191	26,044	8,720	12,315	4,310	44,366
1937-38	15,665	3,040	4,964	29,453	8,141	11,443	5,291	48,241
1938-39	8,580	2,046	4,056	20,008	7,802	12,327	5,171	39,613
1939-40	16,692	3,524	4,637	30,132	10,470	14,792	5,585	52,487
1940-41	8,379	2,321	4,873	20,167	10,532	14,757	6,079	43,134
1941-42	13,913	4,490	4,725	30,142	10,294	13,875	6,735	53,016
1942-43	19,399	2,709	6,481	35,423	12,359	16,917	7,917	63,091
1943-44	12,765	2,188	9,159	32,088	13,067	18,277	8,807	63,003
1944-45	6,065	1,931	6,283	23,548	11,963	17,928	8,880	54,810
1945-46	17,490	4,956	7,729	40,434	8,275	14,535	9,959	69,399
1946-47	27,685	7,598	8,283	51,209	17,092	22,602	10,950	90,106
1947-48	50,154	26,228	9,677	99,477	32,606	37,487	12,525	155,615
1948-49	32,450	10,242	10,087	64,138	40,268	47,636	13,440	131,527
1949-50	40,834	14,524	10,616	81,707	56,268	63,058	16,148	167,594
1950-51	45,587	19,803	13,720	97,871	132,494	139,895	15,500	259,627
1951-52	45,288	27,706	20,382	120,507	72,394	86,034	21,145	234,587
1952-53	57,302	42,128	19,161	139,160	97,158	109,154	23,527	279,982
1953-54	43,939	28,804	20,788	115,744	88,868	105,950	24,238	254,537
1954-55	41,591	23,243	17,426	104,914	83,204	101,059	25,037	239,022
1955-56	38,514	25,227	20,335	110,570	79,822	100,882	30,826	250,685
1956-57	44,846	34,022	23,265	129,994	114,578	138,118	29,003	305,365
1957-58	20,970	19,573	24,435	90,089	84,708	111,027	26,384	235,337
1958-59	43,791	39,889	23,984	140,858	67,595	99,135	32,103	280,007
1959-60	16,495	10,999	21,394	71,092	85,382	123,351	29,454	231,751
1960-61	68,001	37,977	24,525	161,437	70,484	94,451	30,306	294,087
1961-62	51,515	22,952	27,051	124,022	85,801	111,850	29,848	273,451
1962-63	56,285	19,152	25,857	128,417	92,514	127,386	31,968	295,043
1963-64	77,660	26,399	29,567	165,634	113,409	150,466	34,267	358,802
1964-65	74,550	30,135	36,200	178,132	94,328	135,916	37,533	360,507
1965-66	59,559	20,234	31,411	144,017	103,635	152,224	39,293	345,015
1966-67	79,612	26,912	36,779	184,090	104,588	169,226	40,303	404,864

(a) Shares of profits from sale of wool under war-time disposal schemes excluded.

NET VALUE OF PRODUCTION

Year	Rural				Mining and Quarrying (a)	Other Primary (a)	Factories	Total Value of Production
	Agricultural	Pastoral	Dairying	Total				
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1925-26	19,374	11,497	2,988	34,648	2,684	1,537	25,348	64,218
1926-27	19,755	10,697	2,955	34,098	2,924	1,618	27,311	65,950
1927-28	13,661	12,861	3,146	30,858	3,254	1,784	26,975	62,872
1928-29	12,840	10,912	2,721	27,514	2,755	1,639	25,137	57,045
1929-30	10,521	6,795	2,988	21,189	3,270	1,685	21,953	48,098
1930-31	4,368	4,684	2,285	12,051	2,882	1,304	15,510	31,747
1931-32	16,681	4,450	2,435	24,259	1,297	1,357	13,924	40,836
1932-33	12,565	4,775	2,839	20,758	1,885	1,458	15,709	39,809
1933-34	11,820	9,122	2,278	23,768	2,456	1,445	17,283	44,951
1934-35	12,751	6,363	2,242	22,121	3,724	1,460	19,114	46,419
1935-36	14,673	9,205	2,786	27,242	4,739	1,489	23,339	56,809
1936-37	18,115	10,435	3,176	32,270	4,874	1,683	24,543	65,370
1937-38	18,320	9,713	3,782	32,510	4,941	1,758	27,640	66,849
1938-39	19,978	10,110	3,886	35,903	5,909	1,722	27,558	60,891
1939-40	19,482	12,413	4,388	37,412	6,887	1,931	28,807	75,037
1940-41	12,290	12,427	4,204	29,862	6,659	2,062	33,832	72,415
1941-42	19,314	11,559	4,276	36,181	6,595	2,495	49,132	94,402
1942-43	24,495	14,265	6,207	46,688	5,899	2,793	56,732	112,112
1943-44	22,086	15,577	6,991	47,063	5,949	2,961	56,823	112,796
1944-45	13,995	15,391	6,912	39,113	5,870	2,886	54,530	102,399
1945-46	29,935	12,396	7,652	52,640	4,756	3,417	51,203	112,017
1946-47	39,525	19,170	8,484	70,571	5,937	4,124	62,133	142,765
1947-48	83,901	33,861	9,970	131,832	7,037	4,858	77,339	221,066
1948-49	47,901	42,913	10,511	105,545	7,194	5,850	87,443	206,032
1949-50	65,579	57,116	13,637	140,976	5,882	5,814	104,706	257,378
1950-51	72,805	131,594	12,629	221,425	8,375	6,944	135,618	372,362
1951-52	93,807	77,929	17,714	193,792	9,292	8,862	166,493	378,439
1952-53	102,488	99,837	18,854	225,741	10,305	10,363	178,378	424,787
1953-54	83,399	94,847	20,514	203,296	10,075	11,598	200,443	425,412
1954-55	78,361	90,440	21,330	193,795	14,202	11,702	222,055	441,754
1955-56	82,542	89,249	26,547	202,430	(b) 37,302	12,151	241,872	(b) 493,755
1956-57	99,376	124,187	25,022	252,554	43,008	11,966	253,532	561,060
1957-58	64,635	89,726	15,651	173,506	41,249	10,287	266,570	491,612
1958-59	101,141	76,849	18,725	200,694	42,458	11,254	279,620	534,025
1959-60	48,492	100,135	18,281	170,450	44,311	10,694	325,947	551,402
1960-61	116,647	72,237	16,926	208,842	45,773	11,012	340,123	605,751
1961-62	90,933	91,236	19,826	204,484	52,623	10,911	347,828	615,847
1962-63	93,357	103,991	19,741	218,828	49,603	11,574	379,142	659,146
1963-64	125,180	125,979	21,195	274,720	57,836	12,279	427,356	772,191
1964-65	134,239	110,054	25,005	271,350	62,727	14,173	498,588	846,837
1965-66	105,657	123,757	25,127	256,934	62,727	15,817	527,477	862,955
1966-67	137,042	134,608	25,239	300,112	66,909	13,687	563,263	943,972

(a) To 1934-35, local value, i.e. gross value less marketing costs.

(b) Comparability affected by revaluation of iron ore.

TRADE
Direct Overseas Exports

Year	Value of Exports					Proportion of Total Exports Classified by Principal Countries of Destination				
	Total	Wheat and Flour	Barley	Wool	Minerals (a)	U.K.	Other British	U.S.A.	Japan	Other Foreign
	\$'000	\$'000	\$'000	\$'000	\$'000	%	%	%	%	%
1861.....	1,837	76		1,302	362	89.46	10.54			
1866.....	2,837	146		1,518	1,030	81.48	15.68	2.44		0.40
1871.....	3,630	578		1,948	744	89.62	7.79	n.a.		2.59
1876.....	5,928	2,146		2,884	658	89.58	8.06	0.07		2.29
1881.....	6,311	1,846		3,496	488	82.03	15.71	—		2.26
1886.....	5,877	420		3,508	1,126	86.90	6.00	0.04		7.06
1891.....	11,197	2,728		3,776	3,714	80.82	12.77	0.90	0.01	5.50
1896.....	8,111	222		3,038	3,878	56.39	23.25	0.28	1.38	18.70
1901.....	8,866	2,232		2,208	3,252	51.62	25.04	0.10	0.07	23.17
1906.....	13,742	4,780		3,360	3,574	51.68	17.82	0.24	—	30.26
1911.....	20,350	7,671		4,007	6,195	45.96	11.66	0.13	0.04	42.21
1915-16.....	12,272	3,511	19	2,824	4,747	42.92	12.37	21.15	—	23.56
1920-21.....	35,548	23,675	1,175	6,035	828	59.87	8.12	1.16	—	30.85
1921-22.....	29,495	16,280	520	7,052	2,998	45.62	20.50	2.59	1.47	29.82
1922-23.....	27,172	8,778	700	7,794	6,148	40.97	14.93	3.97	2.68	37.45
1923-24.....	33,782	13,754	564	9,290	6,564	40.98	13.05	2.46	8.01	35.50
1924-25.....	38,450	17,234	758	10,140	6,412	45.03	15.25	1.54	2.54	35.64
1925-26.....	38,900	14,825	275	8,865	10,745	51.94	11.55	1.16	6.88	28.47
1926-27.....	34,246	14,189	703	8,297	6,971	44.30	11.09	0.93	2.25	41.43
1927-28.....	36,060	10,831	464	9,788	8,991	45.87	11.43	1.80	2.23	38.67
1928-29.....	29,623	7,822	422	8,463	8,027	44.64	20.01	1.12	0.43	33.80
1929-30.....	30,019	7,734	155	4,487	9,211	58.25	9.63	1.59	3.30	27.23
1930-31.....	20,506	6,078	685	3,006	5,656	54.15	8.51	0.78	2.38	34.20
1931-32.....	24,495	11,803	826	3,243	3,283	58.75	4.49	0.63	3.34	32.79
1932-33.....	25,634	10,450	640	4,579	3,787	61.74	3.06	0.14	7.92	27.14
1933-34.....	25,372	5,463	588	7,526	5,562	66.60	4.74	0.48	5.07	23.11
1934-35.....	23,672	8,279	691	4,881	4,321	61.66	8.35	0.77	7.26	21.96
1935-36.....	30,691	9,020	707	7,561	6,860	67.44	9.81	1.11	6.66	14.98
1936-37.....	33,496	9,890	864	8,144	7,320	68.26	7.17	2.23	2.73	19.61
1937-38.....	38,114	13,848	1,493	6,576	7,909	71.37	7.94	0.99	1.01	18.69
1938-39.....	29,682	6,061	559	7,069	7,107	67.76	14.37	1.06	1.59	15.22
1939-40.....	31,916	4,971	727	10,726	6,317	75.40	9.66	0.88	1.91	12.15
1940-41.....	26,393	8,617	226	6,456	2,606	50.46	19.18	15.48	5.29	9.16
1941-42.....	29,624	3,863	338	11,596	6,220	32.02	21.26	34.14	1.01	8.23
1942-43.....	18,847	4,085	122	6,843	2,084	45.27	32.67	15.12	—	6.94
1943-44.....	31,170	10,504	410	8,509	2,313	40.36	31.47	8.61	—	19.56
1944-45.....	38,334	13,175	115	8,376	5,589	42.34	25.42	13.18	—	19.06
1945-46.....	40,307	7,407	718	14,917	6,550	25.45	26.25	26.43	—	21.87
1946-47.....	65,023	12,304	2,998	16,095	16,138	39.47	28.29	8.86	0.01	23.37
1947-48.....	105,805	24,507	16,030	25,608	17,460	39.01	29.61	8.51	—	22.87
1948-49.....	138,670	38,990	11,952	40,619	24,280	44.37	24.91	8.04	0.07	22.61
1949-50.....	126,864	23,227	10,564	49,621	23,262	42.42	23.05	7.63	2.95	23.95
1950-51.....	215,348	36,852	14,662	109,857	29,893	39.58	14.68	14.41	5.90	25.43
1951-52.....	194,501	42,155	18,035	65,806	42,995	39.36	21.77	14.65	4.60	19.62
1952-53.....	245,897	36,063	30,975	87,135	56,007	45.12	12.99	12.93	8.17	20.79
1953-54.....	220,498	30,518	24,465	78,817	54,059	41.66	16.44	10.57	6.35	24.98
1954-55.....	190,158	24,075	15,794	69,195	50,620	40.78	19.03	11.57	5.05	23.57
1955-56.....	195,332	26,266	14,069	70,063	53,972	38.70	18.12	10.71	6.71	25.76
1956-57.....	245,848	32,558	18,535	98,924	63,707	31.73	15.73	13.09	13.62	25.83
1957-58.....	199,764	24,868	17,183	73,082	50,249	31.50	17.61	9.32	11.23	30.29
1958-59.....	181,831	23,656	20,404	63,208	38,685	34.81	16.53	8.50	13.25	26.91
1959-60.....	181,652	19,028	12,251	74,830	38,085	32.08	13.98	7.91	12.91	33.07
1960-61.....	198,557	36,598	19,219	64,328	44,203	27.55	15.14	4.71	18.11	34.49
1961-62.....	243,975	47,819	23,422	83,107	51,374	25.83	14.11	8.56	14.80	36.70
1962-63.....	212,945	32,603	6,968	83,397	47,555	25.87	15.73	8.69	16.45	33.26
1963-64.....	322,159	76,337	13,828	107,398	63,489	26.63	13.74	5.99	17.59	36.05
1964-65.....	302,242	53,256	15,247	92,535	79,005	25.82	13.41	7.49	17.22	37.06
1965-66.....	296,276	45,863	7,050	94,486	76,896	22.81	15.28	10.37	18.38	32.91
1966-67.....	325,170	55,675	13,056	98,013 (b)	42,952	15.46	15.18	8.85	20.43	40.08

(a) Rocks, minerals and hydrocarbons, pig iron, pig lead, other lead and lead-base alloys, refined and un-refined silver.

(b) For 1966-67, excludes pig iron, pig lead, alloys, etc.

TRADE

Direct Overseas Imports; Retail Sales

Year	Value of Imports		Proportion of Total Imports Classified by Principal Countries of Origin				Value of Retail Sales of Goods	
	Total	Metals, Metal Manufactures, and Machinery	U.K.	Other British	U.S.A.	Other Foreign	Motor Vehicles, etc.	Total
	\$'000	\$'000	%	%	%	%	\$m	\$m
1861.....	2,756	310	80.14	11.26	0.32	8.28		
1866.....	4,193	570	89.69	6.33	1.80	2.18		
1871.....	2,891	342	81.85	11.67	1.45	5.03		
1876.....	6,428	1,084	81.30	12.27	1.44	4.99		
1881.....	7,133	1,022	79.06	13.72	3.80	3.42		
1886.....	5,003	770	78.90	8.46	6.82	5.82		
1891.....	8,063	1,644	71.36	7.77	7.91	12.96		
1896.....	6,475	1,198	68.59	8.35	7.82	15.24		
1901.....	7,854	1,432	56.91	9.11	14.17	19.81		
1906.....	7,965	2,104	63.10	12.70	10.17	14.03		
1911.....	12,591	4,132	58.60	10.83	12.81	17.76		
1915-16.....	10,304	2,816	47.68	15.80	19.81	16.71		
1920-21.....	24,764	6,558	42.07	13.66	21.25	23.02		
1921-22.....	18,094	4,436	59.89	13.14	14.58	12.39		
1922-23.....	21,693	7,636	52.86	14.42	19.75	12.97		
1923-24.....	25,401	9,796	45.46	13.66	27.00	13.88		
1924-25.....	27,941	11,298	44.79	13.45	28.11	13.65		
1925-26.....	28,160	10,602	43.30	14.53	27.84	14.33		
1926-27.....	31,015	12,774	42.72	13.19	29.98	14.11		
1927-28.....	25,019	9,388	44.51	11.12	27.62	16.75		
1928-29.....	22,612	7,908	42.31	13.84	25.88	17.97		
1929-30.....	18,721	5,914	42.01	13.82	26.12	18.05		
1930-31.....	7,833	1,802	36.96	19.93	16.66	26.45		
1931-32.....	5,643	896	37.88	29.42	14.00	18.70		
1932-33.....	7,521	1,140	35.49	29.32	14.34	20.85		
1933-34.....	7,359	1,692	41.48	22.82	14.84	20.86		
1934-35.....	7,931	2,296	42.91	19.69	15.75	21.65		
1935-36.....	10,839	3,616	38.65	18.73	21.16	21.46		
1936-37.....	10,877	3,678	42.50	19.20	15.79	22.51		
1937-38.....	14,948	5,906	36.49	17.70	23.19	22.62		
1938-39.....	11,702	3,924	37.74	20.56	17.13	24.57		
1939-40.....	13,435	3,256	34.89	25.21	14.43	25.47		
1940-41.....	10,924	3,158	38.09	27.17	12.01	22.73		
1941-42.....	14,924	5,164	28.11	34.70	12.36	24.83		
1942-43.....	11,718	3,580	20.56	46.11	14.44	18.89		
1943-44.....	9,562	2,128	24.97	32.40	33.53	9.10		
1944-45.....	9,313	1,388	24.49	40.45	19.91	15.15		
1945-46.....	17,556	3,622	62.28	16.70	10.13	10.89		
1946-47.....	23,875	6,788	35.25	30.26	13.79	20.65		
1947-48.....	45,908	12,740	37.96	25.93	15.45	20.61		
1948-49.....	60,914	21,678	49.33	23.75	9.02	17.90		
1949-50.....	91,509	44,334	52.15	17.96	8.81	21.08		
1950-51.....	112,002	50,446	48.31	18.19	8.42	25.08		
1951-52.....	186,062	80,450	39.99	17.49	9.37	33.14		
1952-53.....	86,549	41,456	43.53	16.56	11.71	28.16	84.3	356.0
1953-54.....	102,945	47,142	50.63	19.41	8.93	21.03	97.6	392.0
1954-55.....	129,607	63,144	49.18	16.70	13.28	20.83	113.4	437.8
1955-56.....	125,504	64,656	49.17	13.94	11.70	25.18	123.6	471.4
1956-57.....	90,813	40,536	44.01	19.12	12.26	24.54	124.7	487.0
1957-58.....	94,205	40,792	46.37	19.32	11.91	22.33	125.4	492.6
1958-59.....	90,693	40,534	42.08	17.07	11.50	26.08	138.0	525.2
1959-60.....	119,493	57,962	43.89	15.83	12.15	28.06	160.2	596.8
1960-61.....	142,764	72,570	32.66	19.65	17.61	30.01	156.1	605.0
1961-62.....	103,386	46,774	31.95	18.91	21.87	27.17	143.1	594.7
1962-63.....	139,826	71,820	31.83	16.63	22.92	28.62	180.5	660.4
1963-64.....	179,651	94,302	24.75	13.62	30.63	31.00	211.6	735.7
1964-65.....	204,856	108,243	23.72	14.21	29.11	32.96	236.5	809.7
1965-66.....	198,156	103,032	23.32	14.33	27.25	35.10	217.9	817.4
1966-67.....	196,771	71,122	21.64	13.69	27.72	36.95	209.0	830.2

TRANSPORT AND COMMUNICATION

Public Transport

Year	Railways			Trams and Buses		Civil Aviation		Shipping (Entering S.A.)
	Passengers Carried	Goods Carried	Revenue	Passengers Carried	Revenue	Passengers Carried	Freight Carried	
	'000	'000 Tons	\$'000	'000	\$'000	'000	Short Tons	'000 Net Tons
1841.....								18
1846.....								25
1851.....								75
1856.....	248	32	44					114
1861.....	310	145	185					103
1866.....	425	171	236					169
1871.....	394	228	235					187
1876.....	1,400	387	402					347
1881.....	2,902	683	837					641
1886.....	3,962	779	1,098					771
1891.....	5,296	1,427	2,448					1,288
1896.....	5,436	1,057	1,973					1,661
1901.....	8,864	1,628	2,473					1,967
1906.....	10,715	1,732	2,700					2,785
1911.....	16,620	2,731	4,030	34,013	480			3,625
1916.....	20,513	2,397	3,931	43,372	649			2,566
1921.....	23,788	2,682	5,884	55,324	1,111			2,887
1922.....	23,316	2,828	3,297	56,787	1,161			3,524
1923.....	24,475	3,284	3,711	59,648	1,226			4,385
1924.....	25,178	3,565	3,929	61,738	1,277			4,591
1925.....	25,647	3,611	4,013	63,153	1,281			4,574
1926.....	25,752	3,563	8,524	66,207	1,322			4,526
1927.....	25,985	3,687	8,289	67,570	1,350			5,123
1928.....	20,881	3,418	7,999	68,546	1,391			4,873
1929.....	17,886	2,762	7,237	66,578	1,355			4,640
1930.....	17,862	2,669	6,597	59,853	1,513			5,024
1931.....	15,453	2,175	5,201	52,756	1,444			4,166
1932.....	15,608	2,430	5,514	48,467	1,319			4,139
1933.....	16,074	2,401	5,489	48,154	1,287			4,375
1934.....	16,325	2,155	5,142	47,021	1,256			4,387
1935.....	16,660	2,347	5,339	48,118	1,279			4,974
1936.....	17,431	2,482	5,781	50,625	1,347			5,318
1937.....	17,777	2,400	6,043	52,082	1,399			5,292
1938.....	17,632	2,897	6,598	51,674	1,385			5,711
1939.....	17,529	2,661	6,267	52,906	1,422	9	108	5,761
1940.....	17,642	2,700	6,367	52,928	1,429	n.a.	n.a.	4,629
1941.....	20,360	2,770	7,060	56,518	1,537	n.a.	n.a.	3,047
1942.....	28,513	3,128	9,928	69,132	1,891	n.a.	n.a.	2,447
1943.....	30,864	3,460	11,665	85,133	2,309	n.a.	n.a.	1,589
1944.....	27,356	3,673	12,004	91,312	2,445	n.a.	n.a.	1,814
1945.....	24,820	3,502	10,969	95,035	2,563	n.a.	n.a.	1,868
1946.....	23,119	2,997	9,794	90,239	2,469	n.a.	n.a.	1,733
1947.....	19,827	3,093	9,243	91,238	2,594	160	2,048	3,086
1948.....	19,067	3,396	10,219	89,661	2,661	230	3,966	3,651
1949.....	18,210	3,544	11,770	82,939	3,084	263	5,573	4,365
1950.....	17,385	3,425	(a)13,098	77,999	2,535	266	6,941	5,217
1951.....	17,178	3,519	14,715	78,141	3,238	298	8,363	5,283
1952.....	18,269	4,966	19,022	75,436	3,684	323	7,745	5,529
1953.....	17,565	4,172	24,976	66,571	(b) 4,232	295	9,028	5,900
1954.....	17,605	4,457	25,848	66,972	4,145	272	11,457	6,108
1955.....	16,849	4,497	26,522	66,446	4,267	310	12,514	6,123
1956.....	16,434	4,436	26,662	63,515	4,668	329	12,539	6,282
1957.....	17,406	4,518	28,132	62,190	4,578	334	12,003	6,360
1958.....	17,564	4,166	27,033	60,083	4,988	337	10,143	6,569
1959.....	16,805	4,227	26,179	59,613	5,056	402	9,802	6,744
1960.....	17,038	4,059	25,652	58,168	5,641	463	9,990	6,745
1961.....	15,574	4,537	27,883	58,912	5,515	449	9,254	7,613
1962.....	15,176	4,638	27,984	57,950	5,430	446	8,591	7,646
1963.....	14,922	4,530	27,826	58,039	5,436	493	9,035	7,886
1964.....	15,227	5,213	29,673	58,571	5,473	548	9,621	9,486
1965.....	15,196	5,131	29,960	56,434	5,899	671	9,987	9,697
1966.....	15,511	4,823	29,137	53,112	6,049	769	11,962	9,517
1967.....	15,432	4,909	30,417	49,735	6,270	827	10,641	

(a) Excludes Treasury grant from 1950.

(b) Excludes Government grant from 1953.

TRANSPORT AND COMMUNICATION

Private Transport and Communication

Year	Motor Vehicles on Register			Drivers and Riders Licences in Force	Telephone Services in Operation	Radio Licences Existing	Post Office Revenue		
	Cars and Station Wagons	Cycles and Scooters	Total (Incl. Other)				Postal, Etc.	Telegraph (a)	Telephone
	No.	No.	No.	No.	No.	No.	\$'000	\$'000	\$'000
1851							14		
1856							18		
1861							33	15	
1866							56	24	
1871							58	22	
1876							114	64	
1881							166	123	
1886							214	160	
1891							227	201	
1896							250	242	
1901					1,831		282	263	
1906					2,510		342	182	61
1911					6,086		490	233	93
1916					10,184		484	277	212
1921	13,178	7,269	21,407		15,984		792	420	468
1922	15,308	7,456	23,948	21,632	17,402		864	418	536
1923	21,661	9,082	33,125	33,230	19,306		910	416	614
1924	n.a.	n.a.	n.a.	48,363	23,155	1,182	834	422	684
1925	33,390	9,531	48,822	n.a.	29,541	3,118	814	410	770
1926	42,540	11,811	62,540	79,659	33,547	12,105	867	402	903
1927	50,603	12,532	74,096	88,695	37,132	15,904	929	446	1,026
1928	54,892	12,321	79,637	92,198	40,407	20,247	809	351	1,249
1929	58,227	13,609	85,472	82,973	42,186	23,927	876	360	1,249
1930	(b)50,391	(b) 9,872	(b)72,590	94,381	42,868	25,651	871	340	1,266
1931	45,140	10,045	67,324	106,053	39,552	32,075	879	282	1,168
1932	46,558	9,736	68,932	81,300	37,815	43,268	871	273	1,060
1933	46,413	10,455	71,065	89,507	37,339	55,639	913	318	1,064
1934	48,939	10,470	76,676	96,916	37,713	72,337	935	323	1,076
1935	49,496	10,741	77,394	93,258	38,652	81,629	954	337	1,119
1936	53,728	11,110	84,253	92,227	39,911	93,881	1,017	327	1,197
1937	56,101	10,802	88,631	135,320	41,467	105,045	1,048	355	1,280
1938	60,537	10,213	95,735	137,627	43,307	115,571	1,099	375	1,370
1939	59,345	9,492	94,577	138,089	45,224	120,584	1,113	399	1,419
1940	58,184	9,215	91,898	129,950	46,767	127,995	1,140	423	1,515
1941	54,528	7,262	86,172	122,280	47,962	136,457	1,252	458	1,522
1942	53,558	5,882	82,023	106,455	48,747	144,209	1,588	553	1,732
1943	56,608	6,329	86,651	113,556	49,152	153,356	1,858	819	1,957
1944	59,271	7,139	91,316	105,951	50,161	155,046	2,049	816	2,024
1945	61,372	8,793	97,124	117,310	51,266	157,604	2,093	831	2,029
1946	64,370	11,418	107,238	137,979	53,126	164,497	1,921	815	2,170
1947	67,449	13,029	115,226	149,304	56,449	180,371	1,999	875	2,345
1948	75,741	15,353	127,458	159,814	60,249	196,336	2,190	946	2,507
1949	84,331	18,506	143,539	172,063	64,008	211,436	2,345	848	2,761
1950	97,501	20,427	163,888	192,469	69,907	226,723	2,546	1,169	3,536
1951	108,941	23,441	183,553	215,157	74,457	243,019	2,938	1,550	4,271
1952	120,523	23,982	200,449	232,119	80,919	(c)207,527	3,872	1,818	5,598
1953	129,663	23,383	214,270	252,216	86,977	210,808	4,086	1,191	6,070
1954	139,704	22,541	226,866	265,727	93,104	218,745	4,311	1,112	6,728
1955	150,506	23,704	244,403	281,091	100,171	221,118	4,670	1,028	7,266
1956	161,441	22,883	257,498	299,158	107,649	228,625	5,033	1,075	8,067
1957	171,922	21,647	269,262	315,044	114,390	234,120	5,579	1,358	8,993
1958	184,258	20,876	282,957	328,833	122,311	238,916	5,877	1,385	9,950
1959	200,331	20,200	301,493	340,973	131,060	247,468	6,247	1,421	10,524
1960	214,928	19,246	318,317	369,584	138,019	249,148	7,359	1,487	12,703
1961	224,521	18,199	325,176	393,869	144,502	249,475	7,729	1,643	14,544
1962	238,905	16,717	338,085	397,803	152,785	249,673	7,761	1,434	15,604
1963	258,116	15,370	357,172	414,656	162,012	256,741	8,322	1,582	16,508
1964	278,625	14,019	378,647	439,061	173,314	266,027	8,709	1,852	19,181
1965	295,914	12,708	394,571	447,983	182,249	(d)269,040	9,312	2,187	23,038
1966	310,969	12,007	409,709	464,778	192,922	281,747	9,759	2,398	24,757
1967	323,951	12,509	422,770	481,496	203,191	278,069	10,117	2,521	26,990

(a) Includes telephone to 1901, and radio to 1948 (licence fees then excluded from Post Office revenue).

(b) Vehicles in actual use on roads from 1930.

(c) All receivers at the one address covered by one licence from 1952.

(d) Combined radio and television licences included since 1 April 1965.

STATISTICAL SUMMARY

PUBLIC FINANCE

Year	State Government					State Taxation (a)	Local Government Revenue		
	Total Revenue	Expenditure		Public Debt			From Rates	Government Grants	Total
		From Revenue	From Loan (Net)	Total	Per Head				
	\$'000	\$'000	\$'000	\$'000	\$	\$'000	\$'000	\$'000	\$'000
1840-41	51	180							
1845-46	95	77							
1850-51	445	367				202			
1855-56	960	1,160		590	5.50	326		54	114
1860-61	1,117	966		1,733	13.30	282	46	40	114
1865-66	1,900	2,130		1,551	9.20	478	60	60	162
1870-71	1,556	1,519		4,335	23.00	498	80	74	194
1875-76	2,640	2,647		7,674	34.20	920	118	80	286
1880-81	4,344	4,108		22,394	78.30	1,168	188	136	488
1885-86	4,558	4,767	2,800	36,680	118.60	1,603	208	108	502
1890-91	5,464	5,207	968	43,315	135.80	1,655	276	254	702
1895-96	5,043	5,019	886	48,433	137.60	1,600	264	194	652
1900-01	5,648	5,693	845	52,129	146.40	1,203	302	222	738
1905-06	5,612	5,437	900	60,165	165.80	735	348	198	740
1910-11	8,363	7,929	3,752	(b)56,065	136.50	1,092	481	336	1,004
1915-16	8,714	9,483	4,371	79,049	179.40	1,403	652	302	1,150
1920-21	14,303	15,087	9,351	104,725	210.70	3,244	986	580	1,936
1925-26	20,948	20,922	12,860	160,521	290.10	5,428	1,640	942	3,441
1926-27	21,570	23,669	12,149	173,121	306.40	5,771	1,804	940	3,930
1927-28	22,694	23,244	9,865	181,225	317.20	7,473	1,908	1,031	4,151
1928-29	21,682	23,544	7,056	183,307	323.80	7,536	1,976	1,128	4,206
1929-30	21,102	24,354	4,977	186,838	326.00	6,976	1,942	1,003	3,836
1930-31	21,452	25,079	6,581	199,055	345.70	6,800	1,672	397	2,612
1931-32	20,964	23,091	568	203,198	351.50	6,153	1,584	503	2,627
1932-33	20,321	22,339	7,038	207,415	357.00	5,467	1,572	628	2,798
1933-34	20,376	22,064	3,361	210,839	361.40	5,818	1,574	490	2,659
1934-35	22,003	21,931	1,131	210,699	360.10	6,449	1,210	557	2,194
1935-36	22,819	22,521	2,502	211,397	359.70	6,409	1,665	509	2,824
1936-37	23,479	23,200	1,653	213,188	361.80	7,081	1,674	586	3,078
1937-38	24,922	24,669	1,230	214,901	362.40	7,844	1,745	610	3,252
1938-39	24,607	25,402	843	217,774	365.00	8,232	1,779	768	3,424
1939-40	25,511	25,837	1,253	218,688	365.00	9,127	1,835	686	3,347
1940-41	25,849	26,015	2,548	219,599	365.30	8,683	1,851	577	3,170
1941-42	30,004	27,425	263	218,380	359.00	(c) 9,484	1,909	337	3,017
1942-43	30,385	29,919	Cr. 1,640	216,858	353.70	3,091	1,953	275	3,097
1943-44	31,090	31,059	Cr. 896	216,610	349.60	3,262	1,924	299	3,043
1944-45	32,226	32,226	Cr. 83	217,742	347.00	3,724	1,935	366	3,165
1945-46	32,687	32,687	3,419	221,498	348.80	4,036	2,040	451	3,474
1946-47	34,385	34,506	4,423	228,260	353.20	4,286	2,271	697	4,061
1947-48	37,686	38,312	4,963	237,704	359.50	4,573	2,610	923	4,740
1948-49	43,690	44,259	9,281	249,440	367.20	5,740	2,967	1,106	5,513
1949-50	58,721	59,100	17,339	266,349	375.40	6,591	3,248	1,496	6,380
1950-51	67,344	66,885	33,871	296,776	405.20	8,104	3,830	1,963	7,579
1951-52	85,276	85,098	52,875	346,872	459.40	9,586	4,686	2,578	9,548
1952-53	98,203	98,153	40,885	389,706	502.30	9,983	5,761	2,306	10,800
1953-54	104,751	101,132	39,879	429,446	538.80	13,073	6,524	3,867	13,416
1954-55	103,768	108,236	42,912	472,925	577.10	15,092	7,041	3,836	14,213
1955-56	118,805	121,665	42,666	512,179	603.60	16,150	8,162	4,381	16,310
1956-57	131,522	131,619	43,793	552,880	633.20	18,620	9,563	4,733	18,436
1957-58	141,283	142,083	37,153	593,628	662.00	19,541	10,333	4,848	19,721
1958-59	145,360	147,414	41,442	635,404	690.00	20,435	11,060	4,948	21,080
1959-60	160,555	161,177	43,432	678,210	717.50	22,297	11,971	5,478	22,535
1960-61	172,559	170,182	44,739	722,038	743.20	23,425	13,076	(d) 3,524	25,034
1961-62	186,405	185,392	43,773	763,399	773.10	25,150	14,887	2,984	27,969
1962-63	195,168	194,589	42,047	807,044	798.50	26,940	15,943	3,215	29,094
1963-64	211,006	207,755	44,218	853,553	822.30	29,825	16,968	4,317	33,725
1964-65	222,181	224,803	53,100	902,823	845.70	34,901	18,625	3,804	33,952
1965-66	236,816	243,650	55,089	955,128	872.30	36,852	20,412	4,076	37,990
1966-67	258,823	258,717	57,016	1,013,060	911.50	42,270			

(a) Excludes all taxation paid to Special Funds.

(b) Debt of Northern Territory and Port Augusta-Oodnadatta railway transferred to Commonwealth.

(c) Uniform taxation in force.

(d) Excludes reimbursement for work done on behalf of Highways and Local Government Department from 1961.

PRIVATE FINANCE

Year	Banking			Life Insurance		General Insurance Revenue	Members		
	Cheque Paying Banks		Savings Bank Deposits	New Policies Issued Sum Assured	Policies in Existence Sum Assured		Co-operative Societies	Friendly Societies	Building Societies
	Advances	Deposits							
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	No.	No.	No.
1846		183							
1851		426	29						
1856		1,419	106						
1861	2,864	1,480	243						
1866	6,240	2,803	499						
1871	5,715	3,043	982						
1876	9,449	6,632	1,703						
1881	13,483	9,885	2,499						
1886	19,226	9,924	3,306						
1891	16,297	15,550	4,316						
1896	9,470	15,343	5,673						
1901	8,546	13,437	7,591						
1906	10,612	15,598	9,534						
1911	16,970	22,257	14,872				10,248		9,572
1916	20,325	27,264	20,070				13,270	65,540	8,962
1921	27,296	44,199	32,635	6,000	40,272	1,305	28,762	70,155	10,621
1926	31,672	51,574	43,558	9,341	60,244	2,045	41,539	77,791	17,011
1927	38,159	53,555	47,202	9,666	63,689	2,285	42,386	78,422	18,003
1928	38,612	52,572	49,883	9,800	67,108	2,246	44,000	78,284	19,208
1929	46,161	46,045	50,457	9,297	69,469	2,216	45,176	77,785	19,161
1930	47,412	44,869	48,024	8,132	68,312	2,007	45,346	76,363	16,663
1931	44,119	44,956	42,844	6,266	65,016	1,627	45,791	(a)	14,081
1932	41,232	48,503	43,134	7,060	64,905	1,640	47,189	72,133	11,869
1933	42,198	49,571	45,031	7,556	66,083	1,652	42,614	71,275	10,814
1934	42,524	51,633	46,875	7,847	67,785	1,651	42,746	70,881	9,715
1935	44,285	51,269	48,370	9,160	71,130	1,698	44,080	71,043	9,617
1936	43,760	52,399	50,617	10,791	75,984	1,859	45,592	71,658	9,257
1937	41,957	57,751	53,012	12,511	82,328	2,127	49,456	73,131	9,418
1938	44,244	58,720	54,487	12,070	87,769	2,434	52,064	74,703	10,364
1939	45,019	58,680	54,794	11,434	92,583	2,527	53,320	74,486	10,569
1940	41,697	61,792	53,127	10,090	96,387	2,584	53,943	75,481	10,532
1941	39,547	64,182	55,019	11,416	101,825	2,643	n.a.	76,357	n.a.
1942	36,082	73,975	61,232	9,812	106,429	2,802	n.a.	77,233	n.a.
1943	32,574	86,491	77,126	10,783	112,590	2,706	n.a.	78,600	n.a.
1944	31,328	100,201	97,184	13,417	121,736	2,604	n.a.	79,530	n.a.
1945	31,970	108,498	113,991	14,816	130,764	2,602	64,924	80,403	16,894
1946	31,560	93,397	131,729	22,805	147,230	2,705	70,620	80,419	18,665
1947	39,674	99,653	135,800	24,935	165,025	3,372	80,150	79,827	19,774
1948	39,585	119,859	147,226	26,555	183,753	4,371	84,470	78,246	20,815
1949	41,387	142,558	162,351	29,003	204,289	5,755	87,733	76,761	22,017
1950	50,412	159,136	175,390	33,076	227,616	7,312	92,066	75,168	22,646
1951	62,109	206,743	195,698	44,899	261,931	9,298	92,424	71,591	22,782
1952	89,163	214,630	207,452	48,475	298,494	12,370	96,134	67,563	23,016
1953	79,574	247,260	227,750	51,671	335,457	14,593	100,323	63,922	23,801
1954	95,968	250,802	245,898	59,540	377,093	16,165	107,069	61,345	23,814
1955	106,740	250,795	263,384	70,458	426,881	18,321	109,667	59,149	24,397
1956	108,515	241,044	271,512	75,301	477,554	20,590	114,018	57,216	24,266
1957	105,618	266,897	284,802	89,470	539,120	23,835	109,636	55,499	(b)
1958	125,971	262,700	297,716	94,137	599,723	24,656	(b)	54,181	24,321
1959	124,924	272,599	314,304	111,440	676,406	26,223	112,844	53,114	24,665
1960	149,172	265,498	331,996	131,951	756,581	27,975	116,645	52,239	24,847
1961	147,348	269,848	333,486	143,628	841,563	32,363	111,031	51,551	24,835
1962	161,508	281,496	361,980	157,636	937,635	33,740	116,405	51,198	21,854
1963	181,162	290,892	416,156	165,183	1,034,471	37,499	108,283	50,765	21,260
1964	199,816	328,484	475,804	197,790	1,161,922	41,759	113,224	50,946	22,348
1965	239,123	352,411	519,268	215,946	1,294,378	45,432	115,828	51,258	22,746
1966	271,132	371,362	558,857	239,250	1,438,998	50,121	120,042	51,109	23,611
1967	292,328	378,401	605,167			56,114	129,230	51,001	23,722

(a) Membership at 30 June from 1932, previously 31 December.

(b) Balance dates of societies do not coincide; from this year figures are aggregates of members at balance dates within the year ended 30 June.

APPENDIX B

PRINCIPAL EVENTS

CHRONOLOGICAL LIST OF IMPORTANT EVENTS IN SOUTH AUSTRALIA SINCE 1836

- 1836**—First migrants landed at Kangaroo Island on 20 July. First South Australian newspaper published in London. Colony's first school opened on Kangaroo Island. The Surveyor-General, Col Light, arrived in November and commenced survey of Adelaide. Governor Hindmarsh arrived in H.M.S. *Buffalo* and proclaimed South Australia a Province on 28 December.
- 1837**—Col Light completed survey of Adelaide and designed the city's present layout. First Adelaide land allotments made. First newspaper published in South Australia. South Australian Supreme Court established. First hospital opened in North Terrace, Adelaide.
- 1838**—First overland cattle and sheep drives from New South Wales. First export from South Australia, a small clip of wool, dispatched. First German settlers under the leadership of Pastor Kavel arrived in South Australia. Formation of first police force.
- 1839**—Col Light died at Thebarton and buried in Light Square. First road in South Australia built between Adelaide and Port Adelaide. Adelaide Chamber of Commerce founded.
- 1840**—Eyre started overland journey to Western Australia. The Municipality of Adelaide incorporated, the first in Australia. McLaren Wharf, Port Adelaide, opened by Governor Gawler.

- 1841—First South Australian mine (silver-lead) opened near Glen Osmond. Assisted migration suspended because of depression. Following financial crisis Governor Gawler recalled and succeeded by Governor Grey. Eyre arrived at Albany in Western Australia.
- 1842—Registration of births, deaths and marriages commenced. Portions of South Australia divided for first time into counties. Copper discovered at Kapunda. Legislative Council constituted. The South Australian Board of Colonisation Commissioners abolished by the British Government.
- 1843—Stripper invented by Ridley. A flour mill built at Hindmarsh.
- 1844—First Colonial Census held, and showed a population of 17,366.
- 1845—Copper discovered at Burra. Sturt explored the north-eastern part of the State. Gold found in South Australia, near Montacute. Assisted migration resumed.
- 1846—First pastoral leases granted.
- 1847—First winery in the Barossa Valley commenced operation. St Peters College established.
- 1848—Opening of The Savings Bank of South Australia. First ferry across the River Murray commenced operations at Wellington.
- 1849—The Central Board of Main Roads established.
- 1850—An Act granting representative government to South Australia passed by the British Parliament.
- 1851—The Central Board of Education set up.
- 1852—First overland gold escort arrived in Adelaide.
- 1853—W. R. Randell's *Mary Ann* and Francis Cadell's *Lady Augusta* initiated the navigation of the Murray.
- 1854—State's first railway (horse-drawn) built from Goolwa to Port Elliot.
- 1855—First South Australian postage stamps issued.
- 1856—First telegraph line opened from Adelaide to Port Adelaide. The new Constitution Act embodying the principle of responsible government proclaimed; it provided for Parliament to consist of two Houses; a Legislative Council and a House of Assembly. First steam railway from Adelaide to Port Adelaide constructed. Population of the State passed 100,000.
- 1857—Railway to Smithfield and Gawler opened.
- 1858—The Real Property Act, which embodied the principles of conveyancing formulated by Torrens, came into operation. First telegraph line to Melbourne opened.
- 1859—A jetty over 1,200 feet in length constructed at Glenelg. Copper discovered at Wallaroo.
- 1860—Water supplied to the City of Adelaide by means of a main connected with the reservoir at Thorndon Park.
- 1861—Copper discovered at Moonta. Water laid on to houses in Adelaide. John McDouall Stuart set out to cross the continent from south to north. The South Australian boundary shifted west to coincide with the boundary of Western Australia.
- 1862—Stuart reached Chambers Bay on the coast of the Northern Territory.

- 1863**—Administration of the Northern Territory taken over by South Australia. Shops of Adelaide lit for the first time with gas.
- 1865**—Annual leases of pastoral lands sold by auction for first time. The Bank of Adelaide founded.
- 1866**—Camels for the purposes of exploration introduced by Sir Thomas Elder. The Adelaide Town Hall opened.
- 1867**—Visit of Alfred, Duke of Edinburgh, who laid the foundation stone of the General Post Office.
- 1869**—Foundation stone of St Peters Cathedral laid. Prince Alfred College opened. Adelaide Chamber of Manufactures founded.
- 1870**—Construction of the transcontinental telegraph from Port Darwin commenced. John Forrest and party made first of two journeys of exploration from Perth.
- 1872**—Transcontinental telegraph from Port Darwin completed and first direct telegram from London received.
- 1873**—Eight-hour working day adopted. First Health Act, establishing a Central Board of Health, passed.
- 1874**—The University of Adelaide founded.
- 1875**—The State Education Act passed. First Forestry Board established.
- 1876**—Telegraph communication with New Zealand established. The Smith brothers invented the 'stump jump' plough. South Australia became first State to give legal recognition to trade unions.
- 1877**—Overland telegraph line from Port Augusta to Eucla completed and first telegram from Perth transmitted. The Adelaide Bridge completed.
- 1878**—Provisions of the Education Act relating to compulsory school attendance brought into force in the Adelaide school district. First tramway (horse-drawn) in any Australian city commenced carrying passengers to Kensington and North Adelaide.
- 1879**—Foundation stone of the Adelaide University laid. First bridge across River Murray in South Australia opened at Murray Bridge. The State's population passed 250,000.
- 1881**—First reclamation of swamp areas of River Murray. Art Gallery opened by His Royal Highness Prince Albert Victor. Construction of the weir which created the Torrens Lake completed.
- 1882**—Establishment of Fire Brigades Board.
- 1883**—The Telephone Exchange commenced operations.
- 1884**—Largs Bay Fort opened. Adelaide Trades and Labor Council, the first delegates society, inaugurated.
- 1885**—Broken Hill silver mines opened. Roseworthy Agricultural College founded. Column erected on Mount Lofty summit as a prominent landmark for mariners.
- 1887**—Act authorising payment to members of Parliament passed. Renmark Irrigation Colony established. First express trains ran between Adelaide and Melbourne. The Jubilee Exhibition opened. Stock Exchange of Adelaide formed by amalgamation of Adelaide Stock Exchange and Stock Exchange of South Australia.
- 1888**—Totalisator legally authorised by an Act of Parliament.
- 1889**—The School of Mines and Industries opened. Smelting of silver-lead ore from Broken Hill commenced at Port Pirie.

- 1890—First South Australian built locomotive completed.
- 1892—Education made free to the compulsory age and standard.
- 1894—Act granting the franchise to women passed by Parliament. Inauguration of industrial arbitration by the establishment of Boards of Conciliation.
- 1896—State Bank of South Australia opened. Women voted for the first time at the general election. Happy Valley Reservoir opened. One of Adelaide's most severe droughts commenced, and continued for several years.
- 1899—Second referendum concerning the establishment of Federation held. In South Australia, 65,990 electors voted for federation and 17,053 against. First military contingent left South Australia for the Boer War.
- 1900—Adelaide lit for the first time with electric light. The Commonwealth of Australia Constitution Act received Royal Assent and a Proclamation was issued uniting the States as the Commonwealth of Australia as from 1 January 1901. Conservatorium of Music opened. First Workmen's Compensation Act passed.
- 1901—Early closing of shops introduced. First Commonwealth Parliament elected. The Duke and Duchess of York arrived in the *Ophir*. The Commonwealth Customs Act came into force. The Electric Light Works was opened. Iron Knob connected to Whyalla by railway.
- 1902—Flinders column, at Mount Lofty, dedicated to the public by the Governor, Lord Tennyson.
- 1905—First kindergarten in South Australia opened.
- 1906—Military cadet system inaugurated.
- 1907—High schools were established in a number of country centres. Municipal Tramways Trust incorporated. First Commonwealth basic wage judgement—the 'Harvester' award—made.
- 1908—Penny Savings Bank bank accounts for children established. The Outer Harbor opened. Adelaide High School established.
- 1909—Adelaide Electric Tramways commenced operations. Payment of old age pensions by the Commonwealth commenced.
- 1910—Payment of invalid pensions by the Commonwealth commenced. First recorded monoplane flight in Australia made by F. C. Custance at Bolivar.
- 1911—'Penny Postage' to all parts of the British Empire introduced. The Federal Defence Act came into operation. Administration of the Northern Territory transferred to the Commonwealth.
- 1913—Medical inspection of school children introduced. Commonwealth Bank formally opened. Metropolitan Abattoirs established.
- 1914—First South Australian military expeditionary force embarked at Outer Harbor. South Australia experienced its most severe drought.
- 1915—Prices of commodities fixed by a commission. A referendum approved the closing of liquor bars at 6 p.m. Women appointed as justices of the peace for the first time. First shipment of iron ore made from Whyalla to steelworks in Newcastle. First women police appointed. Opal discovered at Coober Pedy.
- 1916—Referendum proposing compulsory military service abroad defeated. First Public Service Commissioner appointed. First State living wage with general application declared.

- 1917**—German private schools in South Australia were closed. East-West trans-continental railway completed and the first train ran to Perth. Mr. R. G. Carey, in a Bleriot 60, made the State's first airmail flight from Enfield to Gawler.
- 1918**—Wool clip purchased by the British Government at a flat rate of 13c per lb.
- 1919**—Captain Butler flew from Adelaide across Gulf St Vincent carrying airmail to Minlaton. Soldier Settlement Bill passed by the South Australian Parliament. First Lord Mayor of Adelaide elected.
- 1920**—Sir Ross Smith and party arrived at Adelaide by non-stop flight from Melbourne. Peace Exhibition held at the Jubilee Exhibition Buildings. The Prince of Wales visited South Australia.
- 1921**—The State's population passed 500,000.
- 1922**—First lock on the River Murray completed and opened at Blanchetown.
- 1923**—The Government approved an extensive re-organisation of the railway system.
- 1924**—Public Debt Commissioners were appointed. Air mail between Adelaide and Sydney inaugurated. Waite Agricultural Research Institute established. First radio stations commenced broadcasting.
- 1925**—Show Grounds at Wayville opened. The first Commonwealth election at which voting was compulsory took place. Foundation stone of Adelaide Teachers Training College laid.
- 1926**—The South Australian barley exhibit won all prizes at the Brewers Exhibition in London. The State Bank opened for general banking business. Construction of a 3ft 6in gauge railway from Oodnadatta to Alice Springs approved. State petrol tax declared invalid following a Commonwealth writ against the State.
- 1927**—Extension of the North-South railway commenced. The first train arrived at Renmark following the opening of the Paringa Bridge. The Duke and Duchess of York arrived in South Australia.
- 1929**—The first air mail left Adelaide for Perth. The first train to Alice Springs left Adelaide. Compulsory military training abolished and replaced by a voluntary system. Electric tram service to Glenelg commenced.
- 1930**—All officers of the South Australian Public Service over the age of sixty-five years were compulsorily retired. The South Australian basic wage was reduced by 18c to \$1.25 per day. Transport Control Board, State Finance Committee and Unemployed Relief Council established.
- 1931**—City Bridge opened. Financial Plan formulated at the Premiers' Conference adopted and Financial Emergency Act passed. Commonwealth basic wage reduced by 10 per cent for twelve months but was to be adjusted in accordance with a retail price index. State basic wage reduced from \$1.25 to \$1.05 per day. Basic wage for females reduced, first from \$3.95 to \$3.50 and later to \$3.15 per week.
- 1932**—Boundaries and names of a number of local government areas changed and others abolished following the report of a commission.
- 1933**—Wool auction values for the season rose 6c to 12c per lb. The Farmers Assistance Board, the Betting Control Board and the Metropolitan and Export Abattoirs Board established.
- 1934**—Water restrictions in force from May until the following January.

- 1935—The Nomenclature Act of 1935 restored the former German names to a number of towns whose names had been changed in 1917.
- 1936—Centenary year of the State's foundation celebrated. Contract signed for the completion of Parliament House and the foundation stone laid by the Governor, Sir Winston Dugan.
- 1937—South Australian Housing Trust established. New Commonwealth basic wage of \$7.40 per week which incorporated a 'prosperity' loading declared. First trolley bus service inaugurated. Mount Bold reservoir with a capacity of 6,662 million gallons filled, almost doubling Adelaide's water storage. Schools closed and other precautions taken as a result of an epidemic of poliomyelitis.
- 1938—First South Australian Housing Trust dwelling completed.
- 1939—State's worst heat wave and disastrous bush fires experienced during the first two months of the year. Record high temperature of 117.7°F recorded in Adelaide. New Parliament House opened by His Excellency the Governor-General, Lord Gowrie.
- 1940—Goolwa Barrage completed at a cost of \$1,400,000. Birkenhead Bridge opened. A rapid development of secondary industry took place as munition annexes were added to existing factories and new factories were opened.
- 1941—Scriptural instruction in State schools commenced. First naval vessel built in South Australia launched. First blast furnace to be built at Whyalla went into operation. Child endowment payments inaugurated. Pay-roll tax commenced.
- 1942—Daylight saving of one hour introduced for almost three months. Wages and prices pegged and profits and interest rates restricted. Racing and bookmaking prohibited. Rationing of tea, liquors and clothing commenced. Widows pensions instituted. The uniform Income Tax Act came into force. First coal obtained from Leigh Creek.
- 1943—Price stabilisation legislation came into force. Butter rationing commenced. Wage and price subsidies were introduced and the prices of tea, potatoes and other commodities were reduced in order to bring price indexes and wages to a lower level. Racing resumed but betting shops remained closed.
- 1944—Rationing of meat began. Morgan-Whyalla pipeline officially opened. The first State election with compulsory voting took place. Severe water restrictions imposed. First output of Leigh Creek coal for electricity generation.
- 1945—Unemployment and sickness benefits came into operation. Restrictions imposed on the use of gas and electricity for domestic and industrial purposes.
- 1946—Commonwealth munition factories taken over by various private firms. Payment of government subsidies to hospitals commenced. Restrictions on the use of gas and electricity again imposed. The South Australian Electricity Trust took over the property and functions of the Adelaide Electric Supply Co.
- 1947—Fruit fly detected in metropolitan orchards and efforts made to eliminate it by stripping gardens and orchards. Sugar rationing abolished. Conciliation commissioners appointed following an amendment to the Commonwealth and Arbitration Act. Severe restrictions imposed on imports from North America.

- 1948**—Restrictions on the use of gas and electricity imposed on a number of occasions during the year because of the shortage of coal. Preparation of the Woomera rocket range commenced. Forty hour working week introduced by Arbitration Court award. Serious bush fires occurred in January. Severe storms during April resulted in widespread damage including the destruction of the Glenelg jetty. Referendum on Commonwealth price control defeated. The free medicine scheme came into operation. Clothing and meat rationing abolished. Control of prices handed to the States by the Commonwealth. Full-scale production of the 'Holden' car commenced.
- 1949**—Petrol rationing by the Commonwealth declared illegal but resumed later in the year under a State Act. An extended national coal strike occurred. Water pipeline to the Woomera rocket range completed. The Commonwealth and South Australian Governments ratified an agreement for the standardisation of railway gauges.
- 1950**—Petrol, butter and tea rationing discontinued. Commonwealth free drugs scheme came into operation. Basic wage increased by \$2 per week. Water restrictions imposed in December and remained in force until June 1951.
- 1951**—Serious bush fires occurred in January. Wool prices reached a record high level. Distribution of free milk to school children introduced.
- 1952**—The hospital benefits scheme came into operation. Price control on clothing removed in South Australia. Severe import restrictions gazetted. Installations for the bulk handling of grain opened at Ardrossan. Compulsory Chest X-rays introduced.
- 1953**—Remaining controls on building removed. Port Pirie became the first country town to be proclaimed a city. The medical benefits scheme came into operation. Automatic quarterly cost-of-living adjustments to the basic wage discontinued. Size of the State Cabinet increased from six to eight Ministers.
- 1954**—A severe earthquake occurred in Adelaide on 1 March. Her Majesty Queen Elizabeth II visited South Australia. First unit of Port Augusta power station opened. Construction of dwellings in Elizabeth commenced. Radium Hill mines and treatment works officially opened. Water from the River Murray pumped into metropolitan reservoirs through the Mannum pipeline.
- 1955**—Adelaide Airport at West Beach opened. Mannum-Adelaide pipeline officially opened. The sulphuric acid plant at Port Adelaide commenced operations. Uranium treatment at Port Pirie also commenced. The new satellite town at Elizabeth officially opened.
- 1956**—River Murray flooded for several months and caused considerable damage in irrigation and reclaimed areas. Town Planning Committee established. Pyrites plant at Nairne opened. Charges for beds in public wards at the Royal Adelaide Hospital made for the first time. Atomic device exploded at Maralinga. Salk poliomyelitis vaccination programme commenced.
- 1957**—Centenary of responsible government in South Australia celebrated. Long service leave legislation passed by the South Australian Parliament.
- 1958**—Visit of Queen Elizabeth, the Queen Mother, to South Australia. Introduction of parking meters to Adelaide. South Para reservoir opened and connected to Adelaide water supply. Final run by a street tram in Adelaide, following conversion to diesel bus transport.

- 1959**—Drilling commenced at State's deep oil exploration well at Innamincka. Master plan for beautification of Adelaide's parklands commenced. South Australia ceased to be a claimant State for special grants from Commonwealth Grants Commission. Full-scale television transmission commenced. Sir Thomas Playford completed a record term as Premier in a British country (26 years 125 days). Record low annual rainfall to date for Adelaide (11.32 inches during year). Aborigines became eligible for age, invalid and widows pensions.
- 1960**—Closing of banks on Saturday mornings. First Adelaide Festival of Arts held (March 12-26). Discovery of high grade limesand deposits near Coffin Bay. Completion of second unit and formal opening of Thomas Playford power station at Port Augusta. South Para reservoir storage capacity increased to 11,300 million gallons.
- 1961**—First United Kingdom Trade Commissioner appointed to South Australia. Compulsory driving tests introduced. The trailer ship *Troubridge* made its first run from Port Adelaide to Kingscote and Port Lincoln. Sturt's Desert Pea declared State's official floral emblem. Production ceased at Radium Hill uranium mine. Post trading replaced call system at stock exchange.
- 1962**—Tanker *P. J. Adams* of 32,000 tons—the largest ship built in Australia to this time—launched at Whyalla. Deliveries of bulk wheat from farms exceeded the quantity of bagged grain for the first time. Myponga reservoir completed and linked to Happy Valley reservoir. Duplication of Morgan-Whyalla pipeline commenced. Storage capacity of Mount Bold reservoir increased to 10,440 million gallons. World record price of \$26,250 paid for a Merino ram at Adelaide Royal Show. Conduct of public examinations at candidates own schools approved.
- 1963**—Population of the State passed 1,000,000 mark. Port Stanvac oil refinery 'on stream'. School leaving age increased to fifteen years. Three weeks annual leave for employees governed by State awards and determinations introduced. Ratifying legislation passed for construction of Chowilla dam. First direct dialling for an overseas telephone call from South Australia. Major gas flow from Gidgealpa No. 2 well. Royal visit by Her Majesty, Queen Elizabeth II.
- 1964**—Work commenced on conversion of Port Pirie-Broken Hill railway to standard gauge. Construction of new blast furnace at Whyalla commenced. Bridge over River Murray at Blanchetown opened. First gas from Port Stanvac refinery piped for use in Adelaide's gas supply. Record wind gust (92mph) and all-time low barometric reading (29.09 inches) registered at Adelaide on 12 July. New world land speed record set by Donald Campbell on Lake Eyre.
- 1965**—Tenders called for first on-site construction work for Chowilla dam. Election of first Labor State Government since 1933. First country television station opened at Port Pirie. Steel works including a basic oxygen steel making plant opened at Whyalla. First tenders let for Torrens Island power structure. First woman judge in Australia appointed to Supreme Court of South Australia. Size of the State Cabinet increased from eight to nine Ministers.

- 1966**—Women sworn in for jury service for the first time. The Flinders University of South Australia at Bedford Park officially opened by Queen Elizabeth, the Queen Mother. Second major natural gas strike in Gidgealpa area. New outlet tunnel 9,000ft long from Happy Valley Reservoir completed. ELDO rocket Europa-1 launched at Woomera. Adelaide Central Market opened after rebuilding. Industrial Commission of S.A. replaced the S.A. Board of Industry. Contract let for 700ft diversion tunnel at site of Kangaroo Creek dam. Legislation enacted to permit registration of medical practitioners trained outside of South Australia. The 55,000 ton bulk ore carrier *Bogong* launched at Whyalla.
- 1967**—Introduction of alpha-numero number-plates for motor vehicles. Approval obtained for loans totalling \$35 million to build a natural gas pipeline from Moomba-Gidgealpa to Adelaide. Totalizator Agency Board operated in South Australia for the first time. First books moved into new State Library building. First South Australian lottery drawn. Commonwealth Basic Wage superseded by Total Wage concept. Liquor trading hours extended to 10 p.m. Legislation permitting limited Sunday entertainment introduced. Chowilla dam project deferred. WRESAT-1, first Australian orbital satellite launched from Woomera. New record low annual rainfall for Adelaide (10.11 inches). Zinc deposits discovered near Beltana. Torrens Island power station commenced operations. First contract for supply of natural gas signed. State's first apple-juice plant opened. Sabin poliomyelitis oral vaccine introduced. First off-shore drilling rig—*Ocean Digger*—constructed and launched at Whyalla. Plant installed at first Australian commercial carbon-dioxide well in South East.
- 1968**—Tenders called for the supply of pipes and for the construction of a natural gas pipeline from Gidgealpa to Adelaide. First unit of Torrens Island power station, built at a cost of \$36 million officially opened by the Premier, Mr. Dunstan. Fifth Festival of Arts staged. First greyhound meeting using a mechanical lure conducted. State elections held, Labor Government returned but subsequently defeated on the floor of the House at the first meeting of the new Parliament. New Liberal Premier, Mr. R. S. Hall sworn in. Four weeks leave for State Government employees introduced. Tenders called for \$2 million project to increase pumping capacity of Mannum-Adelaide pipeline. A \$1.3 million *Ikara* anti-submarine missile training centre commissioned at W.R.E., Salisbury. State Government reserved 120 acre site between Smithfield and Gawler for State's third university. Tenders for a new jetty at Glenelg called. Construction at Ceduna commenced on State's first satellite communications station. New R.A.A.F. anti-submarine aircraft squadron arrived and stationed at Edinburgh. State Government raised maximum loan which may be made out of Commonwealth-State Housing Agreement money from \$7,000 to \$8,000. Suburban shopping centre costing \$7 million opened at Marion. Construction of a new \$12.9 million hospital at Modbury approved. Fountain in Victoria Square commemorating the 1963 Royal Visit unveiled and set in operation by H.R.H. the Duke of Edinburgh. The 55,000 ton bulk ore carrier *Iron Hunter* launched at Whyalla.

APPENDIX C

RECENT INFORMATION

In this section details are given of some important developments which have occurred recently.

More up-to-date statistics than those shown in this volume are regularly incorporated in various statistical publications as they become available. A List of Publications is set out on page 619.

PART 1—NATURAL ENVIRONMENT

Weather Conditions in South Australia (pages 16-17)—Rainfall during autumn was above average with heavy falls in most parts of the State. In contrast to the drought conditions which existed during 1967 when a total of 10.11 inches of rain fell, Adelaide to 31 May 1968 had received 11.04 inches. A total of 449 points of rain fell during May compared with 103 points for the same month last year. It is the highest May rainfall since 1963 when 509 points were recorded.

By the end of May, most of the agricultural areas of the State had received above average rains and water storages had been improved considerably.

PART 3—CONSTITUTION AND GOVERNMENT

The House of Representatives (page 43)—Following investigation by a Commonwealth Electoral Commission into the effect of changes in the distribution of population on the prescribed relationship between population and the distribution of House of Representatives electorates, the Commission announced its recommendations on 17 July 1968 which, if approved by Federal Parliament, will give South Australia an additional seat in the House of Representatives. The proposed new electorate—the twelfth for South Australia—will be named Hawker.

Vice-Regal Representation (pages 47-9)—On 3 June 1968, following the expiration of the Governor's term of office and his departure on 1 June, Sir J. Mellis Napier, K.C.M.G., L.L.D., was appointed Lieutenant-Governor. Subsequently however, on 25 June, the Honourable Dr. J. J. Bray, Q.C., Chief Justice, was appointed as the Lieutenant-Governor's Deputy for the period 25 June until 20 July during the illness of the Lieutenant-Governor.

Elections and Party Representation (pages 56-8)—At the 2 March 1968 elections, the seat of Millicent was won by Mr. J. D. Corcoran with a majority of one vote. Following representation by the defeated candidate, a Court of Disputed Returns was constituted which subsequently directed that a by-election be held for the seat of Millicent. The by-election was held on 22 June 1968 and at the declaration of the poll on 24 June, the final figures were:

D. E. Barnes (D.L.P.)	51
M. B. Cameron (L.C.L.)	3,564
J. D. Corcoran (A.L.P.)	3,994
Informal	34
Total Votes	<u>7,643</u>

PART 12—PUBLIC FINANCE

Loan Raisings and Debt Outstanding (page 534)

Semi-Government Authorities: New Money Loan Raisings and Funds Provided for Redemption of Debt, South Australia, 1965-66 and 1966-67

Year	New Loan Raisings in Australia			Funds for Redemption		
	Government	Public	Total	Government	Public	Total
	\$'000					
1965-66	27,944	11,684	39,628	4,119	575	4,694
1966-67	27,465	12,536	40,001	3,720	289	4,010

Semi-Government Authorities: Debt Outstanding, South Australia

At 30 June 1966 and 1967

Authority	Debt in Australia as at					
	30 June 1966			30 June 1967		
	Government	Public	Total	Government	Public	Total
	\$'000					
Tramways.....	9,686	—	9,686	8,740	—	8,740
Electricity supply ...	124,100	95,137	219,237	129,789	102,725	232,514
Fire brigades	—	54	54	—	50	50
Hospitals	—	86	86	—	80	80
Industry assistance ...	9	—	9	5	—	5
Banking	69,323	—	69,323	78,978	—	78,978
Housing	158,065	29,576	187,641	166,932	33,530	200,462
Miscellaneous	1,962	103	2,065	1,994	1,097	3,092
Total debt ..	363,146	124,956	488,102	386,438	137,482	523,919
	Annual Interest Payable					
	\$'000					
Total interest ...	16,437	6,615	23,052	17,588	7,326	24,914

INDEX

Page numbers of principal references shown in bold type.

	<i>Page</i>
A	
Abalone	414-5
Abattoirs Board, Metropolitan and Export	195, 364
Aboriginal welfare	225-6
Accidents	
deaths registered	105
industrial	272-4
prevention of industrial	142-3
railways	479
road traffic	493-4
tramways and omnibus services ..	485
Adelaide Festival of Arts	184-5
Adoption of children	136, 221-4
Adult education	169-71
Aerial	
agriculture	499
medical services	203, 499-500
Aerodromes	299-302, 500
Age distribution of population	119-22
Age pensions	206, 207-8, 579
Aged persons homes, grants for	212
Agent-General for South Australia ...	62
Agricultural Research Institute, Waite	162-3, 177, 341, 410
Agriculture	
aerial	499
area sown to crops	335-6, 584
areas, characteristics of	328-32
crops	333-59
fertilisers	337-9
holdings	324-6, 334
machinery on rural holdings	333-4
machinery production	442
planting and harvesting periods ..	357
production	585-6
products, prices of	358
rainfall	328-9, 583
research	175, 177
schools	152, 168
value of production	357-8, 447, 588-9
Air traffic control	498-9
Aircraft registered	499
Airlines, passengers and freight	500
Airports	299-303, 500
Alienation of land	70-1
Aliens, registration of	115
Ambulance services	203
Anti-Cancer Foundation	205
Anti-Tuberculosis Campaign	201, 215
Apples	354, 355
Apprentice training	169
Apricots	354, 355
Arbitration, industrial	136-7, 250-3
Area of South Australia	1
Art	
galleries	183
South Australian School of	168
Artesian water	18-20, 277-9
Arts, Adelaide Festival of	184-5
Assembly, House of	55-7
Assurance, life	557-60, 595
Australian Barley Board	350-1

	<i>Page</i>
Australian Broadcasting Commission	183, 185, 187
Australian Broadcasting Control Board	185, 186, 188
Australian Loan Council	526
Australian Meat Board	375
Australian Mineral Development Laboratories	177
Australian Wheat Board	342
Australian Wool Board	365
Aviation, civil	299-303, 498-500, 592
Awards, industrial	257-64
B	
Baby health centres	200
Bakeries	444
Banking	540-51
Banking legislation	540-1
Bankruptcy	133-5, 576
Banks	
cheque paying	542-7, 595
Commonwealth Banking Corporation	542
Commonwealth Development Bank	542
Reserve Bank	541
savings	547-51, 595
Savings Bank of South Australia	532, 547-8, 550-1
State Bank of South Australia	532, 543, 544
trading	542-7, 595
Barite (Barytes)	17, 398, 399
Barley	348-51
area and production	348, 585
Board, Australian	350-1
bulk handling	350
exports	462
marketing	350-1
prices	351, 582
production, value of	358, 588
research	349
varieties	349
Barometric pressures, Adelaide	15
Basic wage	257-60, 581
Beef cattle	371-2
Beef production	375
Beekeeping	396
Benefits and pensions, Commonwealth	206-18
Betting and lotteries	193-4
Birthplace of the population	123-4
Births	
ages of mothers	101-2
ages of parents	101
confinements	100-1
ex-nuptial	99-100
first and duration of marriage	102
legitimations of ex-nuptial	99-100
live	100-1, 575
masculinity	99
multiple	100
rates	99-100, 575
registration	98-9
still births	99, 112
Blood Transfusion Service	202
Board of Industry (<i>see also</i> Industrial Commission)	251-2
Boards of Health	194
Boat building	442

	Page
Botanic Garden	189-90
Boundaries of South Australia	1
Bricks and brickworks	438
Broadcasting	185-8, 508-9
Broadcasting Commission, Australian	183, 185, 187
Broadcasting Control Board, Australian	185, 186, 188
Building	
approvals	313-4
control	313
operations	313-9
Building societies	564-5, 595
Bulk handling of grain	295, 296-7, 343, 350
Bursaries and scholarships	156-8
Bus services (<i>see also</i> Tramways and omnibus services)	481-6
Butter production	373, 374

C

C' Series Retail Price Index	467-8, 582
Cabinet and furniture making	445
Cabinet, government	37-8, 41, 49, 51
Cancer	
Anti-Cancer Foundation	205
deaths	108-10, 575
Cattle	
beef	371-2
dairy	372-3
numbers	586
prices	375
slaughtered	375, 586
Celery	353
Cement products	438
Cemeteries	203
Census	
dwellings	307-12
employment	241-3
history and development	77-86
population (<i>see also</i> Population)	86-7, 91-7, 118-25
Cereals	334-52, 586
Charitable institutions and societies (<i>see</i> Welfare)	
Cheese production	374
Chemical fertilisers	439
Chemicals	438-9
Chemists (pharmaceutical)	204
Child	
endowment	206, 209, 579
welfare	200, 218-24, 579
Children	
adoption of	136, 221-4
care and supervision of	218-24
courts	132
immigrant	224
neglected and destitute	218-20
school health services for	200
schools for handicapped	150-1
uncontrolled	218-20
welfare of	200, 218-24, 579
Childrens Hospital	198
Chronological list of events	596-604
Citrus fruit	354
Clays	18, 398, 401-2
Climate	
Adelaide	14-16, 583
South Australia	3-17
Closer settlement	73, 76
Coal	18, 398, 400-1, 587
Colonisation	29-32
Commission, Industrial	252-3
Commonwealth Banking Corporation	542

Commonwealth Conciliation and Arbitration Commission	250
Commonwealth Court of Conciliation and Arbitration	250
Commonwealth Development Bank	542
Commonwealth Employment Service	247-9
Commonwealth Forest Research Institute	410
Commonwealth grants	512-7
Commonwealth Industrial Court	250
Commonwealth referenda	44-5
Commonwealth Scientific and Industrial Research Organization	175-6, 410, 415
Commonwealth-State financial agreements	512-7, 523-4
Communication	501-9, 593
Compensation, workmen's	271-2
Conciliation (<i>see also</i> Industrial arbitration)	250-1
Confinements	100-1
Consolidated revenue account	517-22
Constitution of the Commonwealth	39-40
Constitution of South Australia	45-6
Construction materials	402
Consular representation	63
Consumer Price Index	468-70, 582
Convictions	
Juvenile Courts	132
Magistrates Courts	131-2, 576
Supreme Court	128-9, 576
Co-operative societies	566-7, 595
Copper	18, 397, 403
Corporations (<i>see</i> Local Government)	
Cotton spinning and weaving	443
Council, Legislative	54-5, 58
Councils (<i>see</i> Local Government)	
Court, Courts	
Commonwealth Industrial	250
Juvenile	132
Licensing	133-5
Local	130-1
Magistrates	131-2, 576
of Summary Jurisdiction	131-2
State Industrial	251-3
Supreme	127-9, 576
Crayfish	411, 414
Credit, instalment, for retail sales	570-2
Cremation	203
Crops (<i>see also</i> Agriculture, specific crops)	334-59
Crops, area under	584
Culture and Recreation	178-94
Currency	552-6
decimal	554-6
pre-decimal	552-4
Customs	
duty	465-6, 520
tariff	454

D

Dairy (<i>see also</i> Butter, Cheese, Milk, Pigs)	
cattle	372-3
holdings	326
produce prices	470
production	373-4
production, value of	447, 588, 589
Deaths	
ages	103-4
causes	104-11, 575
expectation of life	114
infants	111-3, 575
rates	102-3, 575
registration	98
Debt Commission, National	526-7

INDEX

609

	Page
Debt, public	528-30, 594
Decimal Currency	554-6
Dentists	204
Department of Marine and Harbors ..	295-6, 494
Departments, State Government	58-60
Destitute persons, relief of	224-5
Diseases, infectious	
deaths	107-8
notifications	201-2
Distances from Adelaide	
to Australian capitals	473
to overseas ports	498
Distilleries and wineries	444-5
Divorce	
ages at marriage	238
ages at time of divorce	239
children of parties to divorce	240
decrees granted	236-40, 576
duration of marriage	238-40
grounds of decrees	236-7
jurisdiction	129-30
legislation	234-5
petitions lodged	235-6
Dog fence	359-60
Dolomite	18, 398, 401
Drainage	286-7
Drama	183
Dried Fruits Board	355
Drivers licences	490, 593
Droughts	8
Dwellings	
census data of	307-12
completed	316-7
construction	315-7
location of new	318
rents	311
unoccupied	312

E

Earnings	264-6
Education	143-73, 577
adult	169-71
apprentice	169
finance	172-3, 577
migrant	171
pre-school	145-6
primary	149-51
secondary	151-8
technical	166-8
tertiary	158-66
trade	169
Educational attainment of the population	125
Egg	
prices	470
production	396
Elder Conservatorium of Music	163, 183
Elections	
Commonwealth Parliament	43-4
South Australian Parliament	56-7
Electrates	
Commonwealth	36-7
House of Assembly	53, 56, 57
Legislative Council	53, 54, 56
State	36-7
Electrical equipment produced	440-1
Electricity	
consumers	305
distribution	304-5
generation	302-3, 446-7
supply	302-5
Electricity Trust of South Australia ..	302-5, 531
Employee organisations	253-4

	Page
Employer organisations	255
Employment	241-9, 580
building	318-9
factory	424-6, 580
fisheries	412
forestry	410
mining and quarrying	404
railways	477
rural	332-3, 580
services	247, 248-9
tramway and omnibus services ..	484
Engineering workshops	440
Estate duties	520
Estates of deceased persons	130, 568-70
European Launcher Development Organisation (ELDO)	174
Evaporation	12-13, 583
Events, chronological list of	596-604
Examinations, schools	155-6
Excise duty	465-6, 520
Executions	128
Executive government	
Commonwealth	40-2
State	49
Ex-nuptial births	99-100
Expectation of life	114
Expenditure (see Finance)	
Exploration	
after colonisation	32-5
before colonisation	25-9
Export controls	455
Exports, overseas (see also Trade, overseas)	455, 457-8, 460-5, 590
commodities	462-3, 590
country of consignment	462-3, 590
principal ports	465
Export Payments Insurance	457

F

Factories	
classification	418-20
class of industry	422-4
definitions, statistical	417-8
development	416-7
employment	416, 417, 423-6
fuel and power used	428-9
government	437
individual industries	437-47
land and buildings	432, 434
legislation	421
location	421-2
materials used	428-9
motive power	434-5
output, value of	429-30, 587
plant and machinery	432-3, 434
production	
selected items	435-7
value of	318, 429-30, 447, 589
salaries and wages	426-7
size	423-4
structure of industry	421-4
wages, average	426-7, 581
Farm machinery	333-4, 586
Farming (see also Rural)	
areas, characteristics of	328-32
development	326-8
Farms (see Rural holdings)	
Fauna	24
Fertiliser	
production	439
used	337-9

	Page		Page
Finance		Government	
Commonwealth-State		Commonwealth	39-45
Education	75, 287, 512-7, 523-35	departments, State	58-60
Electricity Trust of South Australia	159, 164, 167, 173, 516, 577	finance, State	517-30, 594
Flinders University	531	local	64-6
for homes	321-3	South Australia	45-63
harbors	296	system of	36-9
health	203-4	Governors	47-8
hospitals	578	Grants	
land settlement	75-6	Commonwealth	512-7
local government	66, 535-9, 594	to local government authorities	536-7
mental institutions	515-6	to semi-government authorities	532-3
Municipal Tramways Trust	483-4, 531	Grape growing districts	379-82
police	139, 576	Grapes	356-7, 379-85
private	540-72, 595	Grocery prices	470
public	510-39, 594	Gypsum	17, 398, 399
railways	474-7, 515, 523-5		
roads	287, 290-1, 515, 536-7		
semi-government	530-5		
South Australian Housing Trust	532		
State Government	517-30, 594		
tuberculosis	515, 516		
Universities	159, 164, 516, 517		
University of Adelaide	159		
Fire services	140-1		
Fisheries	411-5		
administration and law	412		
employment	412		
marketing	415		
production	413-5		
research	415		
Flats	308-9, 311-2		
Flinders University	159, 163-6		
Floods	7-8		
Flora	21-4		
Flour milling	444		
Flying Doctor Service	203, 499-500		
Food Aid Convention	347		
Food and drink manufacture	444		
Food prices	470		
Forestry	405-411		
administration	409		
employment	410		
plantings	406-8		
production	409-10		
production, value of	447		
protection	411		
research	410-1		
Franchise			
Commonwealth Parliament	40		
House of Assembly	55		
Legislative Council	54-5		
local government	65		
South Australian Parliament	52, 54, 55		
Friendly societies	229-30, 595		
Fruit			
exports	462		
growing	353-7		
Funeral benefits	211-2		
Furniture making	445		
G			
Gaols and prisons	139-40		
Gardens	189-91		
Gas			
natural	18, 403		
oil refinery gas	306, 439-40		
production	306		
supply	305-7		
General Agreement on Tariffs and Trade (G.A.T.T.)	457		
General insurance	560-2, 595		
Geographical location	1		
Geology	3		
		H	
		Harbors	295-9
		Harbors Board, South Australian	295
		Harvesting and planting periods	357
		Hay	352, 585
		Health	195-205, 578
		administration	195-6
		boards of	194
		centres, baby	200
		inspection, school	200
		mental	199-200
		Health Services, National	212-5, 579
		Heart disease deaths	108, 575
		Heart Foundation of Australia, National	205
		Hire purchase	570-2
		History of South Australia	25-35, 596-604
		Eyre, Edward John	32-3
		Flinders, Matthew	26, 163
		Gawler, George	31
		Light, William	28-9, 31, 32
		Stuart, John McDouall	34-5
		Sturt, Charles	26, 27-28, 33-4
		Wakefield Plan	29-30
		Holidays, public	268
		Home finance	321-3
		Homes	
		for aged persons, grants for	212
		savings grants	322
		war service	321-2
		Honey and beeswax	396
		Horses	586
		Hospital benefits	213
		Hospital benefits organisations	227-8
		Hospitals	
		general	196-9, 578
		private	198-9
		psychiatric	195, 199-200, 578
		public	196-8
		repatriation	198
		Hotell licences	133-5
		Hours of work	266-8
		House of Assembly	55-7
		Household appliances produced	440-1
		Housing (see also Dwellings)	
		Agreement, Commonwealth-	
		State	321, 523, 564
		finance	321-3
		rents	311
		Housing Loan Insurance Scheme	323
		Housing Trust, South Australian	319-20, 532
		Humidity	
		Adelaide	15-16
		South Australia	11-12
		I	
		Illegitimate births	99-100
		Immigration (see also Migration)	115
		Import controls	455

	Page
Imports, overseas (<i>see also</i> Trade, overseas)	455, 457-60, 465, 591
commodities	459-60
country of origin	460, 591
principal ports	465
Industrial	
accidents	272-4
accidents prevention	142-3
arbitration	136-7, 250-3
boards	251-2
Commission	252-3
Court	
Commonwealth	250
State	251-3
disputes	255-6
legislation	250-3
safety	142-3, 270-4
tribunals	136-7, 250-3
Industrial and heavy chemicals	438-9
Industry, Board of	251-2
Industry of work force	242-3
Infant	
mortality	111-3
welfare	200
Infectious diseases (<i>see</i> Diseases, infectious)	
Instalment credit for retail sales	570-2
Institute of Medical and Veterinary Science	176-7
Insurance	
general	560-2, 595
Housing Loan Scheme	323
life	557-60, 595
third party	490-1
Interest rates	529, 547, 551
International Grains Agreement	345-7
International Wheat Agreement	345
Invalid pensions	206, 207-8, 579
Iron extraction and refining	440
Iron ore	17, 398-9, 587
Irrigation	283-5, 336-7, 354, 381, 584
Irrigation Trust, Renmark	283-4

J

Joinery workshops	445
Judges	127-8
Judicature	39, 128-30
Jury system	136

K

Kindergarten teacher training	171
Kindergartens	145-6

L

Labour, employment and organisation of	241-72
Lambing	363
Land	
administration	69
development	73-6
leases	71-3
licences	72-3
reclamation	284
registration	68
settlement	73-6
Settlement Scheme, War Service	74-5, 284
tax	519
tenure	67-73, 584

Launcher Development Organisation, European (ELDO)	174
Law and order	126-43
Lead smelting	440
Leases	
land	71-3
mining	72-3
pastoral	71
perpetual	71-2
Leave	
annual	268-9
long service	269
sick	269
Legal	
assistance	137
profession	127
Legislation passed, South Australia	60-2
Legislative Council	54-5, 58
Legislature	
Commonwealth	40, 42-4
South Australian	51-8
Legitimations	99-100
Libraries	162, 165, 178-81
Library, State, of South Australia	178-9
Licences	
drivers	490, 593
fishermen	412
foster mothers	220
general insurance	560-1
hotel	133-5
land	72-3
liquor	133-5
maternity homes	220
mining	72-3
radio listeners	187, 508-9, 593
road transport	479-81
taxi-cabs	486-7
television viewers	188, 508-9
Life	
expectation	114
insurance	557-60, 595
saving	141-2
Limestone	18, 398, 401
Liquor licences	133-5
Livestock (<i>see also</i> Cattle, Horses, Meat, Pigs, Sheep)	359-75, 586
Loan	
Council, Australian	526
Fund	523-5, 527-8
raisings	
Commonwealth and State	526
local government authorities	538
semi-government authorities	533-4
Loan Fund Payments, local government authorities	539
Local government	64-6
Local government authorities finance	66, 535-9, 594
Lodges	229-30, 595
Lotteries and betting	193-4

M

Machinery	
on rural holdings	333-4, 586
produced in factories	440, 442
used in factories	432-4
Malignant neoplasms (cancer), deaths	108-10, 575
Mannum-Adelaide pipeline	276, 280
Manufacturing (<i>see also</i> Factories)	416-47, 587
Manures (<i>see</i> Fertiliser)	
Marginal Lands Scheme	73-4, 339
Marine and Harbors, Department	295-6, 494
Marketing Boards (<i>see</i> under specific rural industries)	

	Page		Page
Marital status of the population	122	N	
Marriage		National Debt Commission	526-7
ages	231-2	National Debt Sinking Fund	526-7
average age	232-3	National Health Services	212-5, 579
legislation	230	National Heart Foundation of Australia	205
marital status	231	National Parks	190-1
numbers and rates	230-1, 576	National Parks Reserves	190-1
of minors	233-4	National pleasure resorts	191
religious and civil	234	National Safety Council	143
Masculinity of population	118-9	National Trust of South Australia ...	181-2
Maternal and child welfare	200	National Welfare Fund	517
Maternity allowance	206, 209-10	Nationality of population	124
Matrimonial causes (<i>see also</i> Divorce)	129-30, 234-40	Naturalisation	117-8
Meat		Newspapers	189, 446
Board, Australian	375	Nurses registered	204, 578
exports	462-3	Nursing services	202
marketing	374-5		
prices	470	O	
production	374-5	Oats	351, 585
Medical		Occupational status of population	241-3
benefits	213-4	Occupations of work force	242
benefits organisations	227-8	Oil refining	439
inspection of school children	200	Omnibus services (<i>see also</i> Tramways and omnibus services)	481-6
practitioners	204-5, 578	Opal	17, 398, 400
research	176-7, 205	Opticians	204
service for pensioners	214-5	Oranges	354
services, aerial	203, 499-500	Orchards	353-5, 585
services, repatriation	196, 188, 217	Overseas and interstate representation	62-3
Medical and Veterinary Science, Institute of	176-7	Overseas Telecommunications Commission	501
Mental		Overseas trade	454-66, 590, 591
health services	199-200		
institutions, finance	515-6	P	
Metal extraction and refining	440	Paints	439
Meteorology	3-17, 583	Parks and gardens	189-91
Metropolitan and Export Abattoirs Board	195, 374	Parliament	
Migrant education	171	Commonwealth	42-4
Migration		South Australia	51-8
assisted	117	Parliamentary salaries and allowances	54
overseas	115-7	Pastoral	
regulation of immigration	115	holdings	326
trends	115-6	leases	71
Milk		Pastoral and Dairying (<i>see also</i> Butter, Cattle, Cheese, Milk, Pigs, Sheep, Wool)	359-75, 586, 588, 589
marketing	373-4	Pastures	360-1, 584
prices	470	Peaches	354, 355, 470
production	373, 586	Pears	354, 355
utilisation	373-4	Peas, green	353
Mineral research	177	Pensioner Medical Service	214-5
Minerals	17-18, 397-405	Pensions	
Mining (<i>see also</i> Mining and quarrying)		age and invalid	206, 207-8, 579
administration and law	404-5	war and service	206, 216-7, 579
claims	72-3	widows	206, 208-9
leases	72-3	Pensions and benefits, Commonwealth	206-8
licences	72-3	Pharmaceutical benefits	214
production	398	Physical features	1-2
safety regulations and inspection	270	Physiotherapists	204
Mining and quarrying (<i>see also</i> Mining)	397-405, 589	Pigs	374, 375
employment	404	Pipes and tubes produced	443
production	398, 587	Plant and machinery, factories	432-3, 434
production, value of	447, 589	Planting and harvesting periods	357
Ministry		Pleasure resorts, national	191
Commonwealth	40-2		
South Australia	51		
Money orders	505		
Morgan-Whyalla pipeline	278-9, 280		
Mortgages	570		
Mothers and Babies Health Association	111, 200		
Motor vehicles			
accidents	493-4		
census	491-2		
control of road traffic	487		
drivers licences	490, 593		
insurance	490-1		
production and repairs	441		
registration	487-9, 593		
tax	519		
usage	492-3		
Multiple job holding	245		
Municipal Tramways Trust	481-6, 531		
Museums	181-2		
Music	182-3		

	Page
Police	
finance	139, 576
force	137-9, 576
Poliomyelitis	107, 201-2
Population	
Aboriginal	226
Adelaide metropolitan area	95-6
age distribution	119-22
census	56-7, 91-7, 118-25
characteristics	118-25
country of birth	123-4
education of	125
estimates	574
geographical distribution	91-7
growth	86-91, 574
increase	87-8
local government areas	95-6
marital status	122
masculinity	118-9
mean	89
nationality	124
natural increase	87, 574
period of residence in Australia	122-3
religion	124-5
rural	93-4, 332
settlement	89-91
sex distribution	118-9
statistical divisions	94-7
urban areas	91-3, 94, 97
Ports	295, 296-9, 465
Post Office	
revenue	503-4
services	501-8
Postal	
orders	505-6
services	501-6
Potatoes	353
Poultry	396
Premiers	50
Press	189
Prices	
agricultural products	358
barley	351, 582
Consumer Price Index	468-70, 582
control	471
indexes, retail	466-70, 582
livestock	375
retail food	470
wheat	346, 347, 582
wool	370, 582
Primeage duties	455
Printing and bookbinding	446
Prisons	139-40
Private omnibus services	485-6
Private schools	150, 153-5
Probate	130, 568-70
Production	
factory	416-47
fisheries	413-5
forestry	405-11
mining	398
rural	324-96
Production, value of	
primary	357-8, 366-7, 414, 447-8, 588-9
secondary	418, 429-30, 447, 589
Property sales	68
Psychiatric hospitals	195, 199-200, 578
Public	
debt	528-30, 594
finance	510-39, 594
relief	224-5, 579
safety	140-3
Trustee	137
Public Finance, structure of	510-2
Publications, list of	619
Pyrite	17, 398, 400

Q

Quarrying and Mining (*see* Mining,
Mining and quarrying)

	Page
R	
Radio broadcasting	185-7, 508-9, 593
Radio communication	501, 508-9
Rail standardisation	293-4, 477, 515, 523
Railways	
accidents	479
employment	477
finance	474-7, 515, 523-5
freight carried	476, 592
historical summary	292-3
operations	474-9
ownership and control	291-2
passenger journeys	475, 592
passenger mileage	475
rollingstock	441, 478
traffic	475-6
workshops	441
Rainfall	
Adelaide	16, 17, 583
agricultural areas	328-9, 583
South Australia	4-8
Real estate	
mortgages	570
sales	68
Recent legislation passed, South Australia	60-2
Recreation and culture	178-94
Recreation and sporting facilities	191-3
Referenda	
Commonwealth	44-5
South Australia	58
Reformatories	219-20
Registration	
aircraft	499
aliens	115
births and deaths	98-9
land	68
mortgage	570
motor vehicles	487-9, 593
shipping	494-5
unemployment	247, 580
Rehabilitation	211
Relief, public	224-5, 579
Religion of the population	124-5
Religious denomination of marriages	234
Renmark Irrigation Trust	283-4
Rent control	471-2
Rents, house	311
Repatriation	
benefits	216-8
hospitals	198
medical services	196, 198, 217
Representation, consular	63
Research organisations	174-7
Reserve Bank of Australia	541
Reservoirs	275-80
Responsible government, South Australia	47
Retail	
price indexes	466-70, 582
sales	449-53, 591
trade	449-53
Revenue (<i>see</i> Finance)	
River Murray Agreement	285-6
Road Safety Council, South Australian	143
Road traffic accidents	493-4
Roads	
Commonwealth aid	287, 290-1, 515, 516
finance	287, 290-1, 515, 536-7
length	288
research	289-90
Rural (<i>see also</i> Agriculture, Dairying, Pastoral)	
areas, characteristics of	324-96
employment	328-32
holdings	332-3
irrigation	324-6, 334, 584
population	336-7
production	93-4, 332
production, value of	585-6
rainfall	588-9
rainfall	328-9
Rye	351-2

	Page		Page
S		T	
Safety		Talc	18, 398, 400
Council, National	143	Tariff	
industrial	142-3, 270-4	anti-dumping duties	455
public	140-3	Board	455-6
regulations and inspection	270-1	customs	454
Salaries (see Wages)		primage duties	455
Salaries and Allowances, Parliamentary	54	Special Advisory Authority	456
Sales, retail	449-53, 591	Taxation	514, 518-20, 594
Sales tax	453, 520	Taxi-cabs	486-7
Salt	17, 398, 399	Teacher training	171-2
Savings Bank of South Australia	532, 547-8, 550-1	Teachers	147, 154, 171-2
Savings banks	547-51, 595	Technology, South Australian Institute of	166-8
Sawmilling	445	Telecommunications Commission, Overseas	501
Scholarships and bursaries	156-8	Telegraphs	502, 506
Schools		Telephones	502, 507-8, 593
agricultural	152, 168, 341	Television broadcasting	185, 187-8, 508-9
area	149, 150, 152	Temperature	
art	168-9	Adelaide	14, 15, 583
Catholic	146, 150, 154-5	South Australia	8-11
correspondence	150, 153, 168	Tenure	
examinations	155-6	land	67-73, 584
for handicapped children	150-1	systems of	69-73
health services	200	Testamentary causes jurisdiction (see also Probate)	130
leavers	245	Tides	298-9
primary	149-50	Tiles	438
private	150, 153-5	Timber milling	445
pupils	148, 577	Time, Central Standard	1
secondary	151-8	Time payment	570-2
size	146-7	Tomatoes	353
special rural	153	Total Wage	257, 260
teachers	147, 154, 171-2	Town Planning Committee	288-9
Scientific and research organisations	174-7	Trade Commissioner Service	456
Semi-government authorities		Trade Correspondents	456
finance	530-5	Trade education	169
grants to	532-3	Trade, overseas	
loan raisings	533-4	agreements	457
scope	63	exports	
Service pensions	206, 216-7, 579	commodities	460-4, 590
Settlement, land	73-6	country of consignment	462-3, 590
Sewer rates and charges	283	principal ports	465
Sewerage		imports	
administration	281	commodities	459-60
country	282-3	country of origin	460, 591
metropolitan	281-2	principal ports	465
Sheep		legislation	454-5
breeds	362-3	method of recording	457-8
flocks	362	promotion	456, 457
lambling	363	representation abroad	456
numbers	586	Trade, retail	449-53
numbers and distribution	361-2	Trade unions	253-4
prices	375	Trade, wholesale	453
shearing	364-5	Trading banks	542-7, 595
slaughtered	375, 586	Traffic	
wool (see Wool)		accidents	493-4
Sheet metal working	442	control of road	487
Ship building	442		
Shipping			
arrivals	495-7, 592		
control	494		
departures	497		
registration	494-5		
Shops, retail, sales	449-53		
Sickness benefits	206, 210-1		
Silos	297, 343, 350		
Slaughtering of livestock	375, 586		
Smelting	440		
Snow and hail	7		
Social services, Commonwealth	206-12		
Social welfare	205-30, 579		
Soils	20-1		
Soils research	175		
Soldier settlement	74-5, 284		
South Australia, referenda	58		
South Australian Housing Trust	319-20, 532		
South Australian legislation	60-2		
South Australian Road Safety Council	143		
Space projects, United States	174-5		
Sporting and recreational facilities	191-3		
Stamp duties	519		

	Page
Tramways and omnibus services.....	481-6
accidents	485
employment	484
finance	483-4, 531, 592
rollingstock	485
traffic	483-4, 592
Tramways Trust, Municipal	481-6, 531
Transport	473-500, 592, 593
Transport Control Board	479-80
Transport co-ordination, road and railway	479-81
Transportation Study, Metropolitan Adelaide	289
Triplet births	100
Trust funds, State	522-3
Trustee, Public	137
Tuberculosis	
campaign against	201-2, 215
deaths	105, 107-8, 575
finance	515, 516
hospitals	198
notification	201
Twin births	100

U

Unemployment	241-8
benefits	206, 210-1, 580
registration	247-8, 580
Unions	
employees	253-4
employers	255
trade	253-4
United States space projects	174-5
Universities, finance	159, 164, 516, 517
University, Flinders	159, 163-6
University of Adelaide	158-63
Uranium	18

V

Value of production	
primary	357-8, 366-7, 414, 447-8, 588-9
secondary	418, 429-30, 447, 589
Vegetables	352-3
Vegetation	21-4
Veterinary Science, Institute of Medical and	176-7
Vice-regal representation	47-9
Vineyards	356-7, 382-5
Voting at elections	
Commonwealth	43, 44
South Australian	56-7

W

Wage and salary earners in employment	245-6
Wage	
State Living	260-1
Total	257, 260
Wages	
average, factory employees	426-7, 581
award	262-4
basic	257-60, 581
earnings	264-6
rates	262-3, 581
Waite Agricultural Research Institute	162-3, 177, 341, 410

War	
pensions	206, 216, 579
Service	
Homes	321-2
Land Settlement Scheme	74-5, 284
Water	
artesian	18-20, 277-9
conservation	275-80
rates and charges	280-1
storage	275-80
supply	
artesian	277-9
country	277-8, 280
metropolitan	275-7, 280
underground	18-20, 279
Weapons Research Establishment	174-5
Weather	3-17
Welfare	
Aboriginal	225-6
child	218-24, 579
maternal and child services	200
private	227-30
State Government	218-27
social	205-30, 579
Wheat	339-48
Agreement, International	345
area and production	340, 585
Board, Australian	342
bulk handling	295, 297, 343
exports	462, 464
f.a.q. standard	343-4
grading	343-4
marketing	342-3
prices	346, 347, 582
research	341-2
Stabilisation Plan	344-5
Trade Convention	345-7
value of production	358, 588
varieties	340-1
Wholesale trade	453
Widows pensions	206, 208-9
Wind	12, 15
Wine	
exports	391-2
industry, South Australia	376-95
making	386-90
marketing	390-3
production	356, 376, 389
research	394-5
Wineries and distilleries	444-5
Wireless broadcasting	185-7, 508-9, 593
Wireworking	443
Wool	
Board, Australian	365
clip	364-5
exports	462, 464
levy	365-6, 520
marketing	368-9
prices	370, 582
production	366-7, 586
quality	367-8
Reserve Price Scheme	369-70
sales, Adelaide	368-9
spinning and weaving	443
tax	365, 520
value of production	366-7, 588
Work force	241-4
Workmen's compensation	271-2

X

X-ray examination, compulsory	201
-------------------------------------	-----

Z

Zoological gardens	190
--------------------------	-----

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS
SOUTH AUSTRALIAN PUBLICATIONS

Publication	Price		Latest Issue at 30 September 1968	Month of Issue
	Ex- cluding Postage	In- cluding Postage (a)		
	\$	\$		
PRINTED				
<i>Annual :</i>				
South Australian Year Book	1.00	1.29	1967	Nov. 1967
Statistical Register of South Australia ;				
Part I—Social	0.40	0.49	1965-66	May 1968
Part II—Demography	0.40	0.53	1964-65	Aug. 1967
Part III—Finance	0.40	0.49	1965-66	Feb. 1968
Part IV—Trade	0.60	0.73	1964-65	Dec. 1967
Part V(a)—Primary Production	0.80	0.97	1965-66	Feb. 1968
Part V(b)—Secondary Production	0.60	0.69	1965-66	Mar. 1968
Part VI—Transport and Communication	0.40	0.49	1965-66	May 1968
Part VII—Statistical Summary	0.40	0.49	1965-66	Mar. 1968
Bound Volume	3.00	3.33	1964-65	Mar. 1968
Pocket Year Book of South Australia ..	(b)	(b)	1967-68	June 1968
<i>Quarterly :</i>				
Quarterly Abstract of South Australian Statistics	0.25 (c)	0.34	June 1968	July 1968
DUPLICATED				
<i>Annual :</i>				
Cereal Harvest Estimate	Free		1967-68	Jan. 1968
Cereals	Free		1966-67	Oct. 1967
Rural Production	Free		1966-67	Nov. 1967
Livestock	Free		1966-67	Oct. 1967
Machinery on Rural Holdings	Free		1966-67	Feb. 1968
Nursery and Flower Production	Free		1965-66	July 1967
Vintage Estimate	Free		1967-68	June 1968
Wine and Spirits	Free		1966-67	Dec. 1967
Factories	Free		1966-67	May 1968
General Insurance	Free		1966-67	Mar. 1968
Overseas Trade	Free		1967-68	Aug. 1968
Births, Deaths and Marriages	Free		1967	Apr. 1968
Divorce	Free		1967	July 1968
Industrial Accidents	Free		1966-67	Nov. 1967
<i>Six Monthly :</i>				
Population in Local Government Areas	Free		June 1967	May 1968
<i>Quarterly :</i>				
Building Operations	Free		June Qr. 1968	Sept. 1968
New Houses and Flats (Preliminary Estimates)	Free		June Qr. 1968	July 1968
Wholesale Sales of Wine and Spirits ..	Free		June Qr. 1968	Aug. 1968
Overseas Trade	Free		June Qr. 1968	Aug. 1968
<i>Monthly :</i>				
Monthly Summary of Statistics	Free		Sept. 1968	Sept. 1968
Building Approvals	Free		Aug. 1968	Sept. 1968
Chicken Hatchings and Poultry Slaugh- terings	Free		July 1968	Sept. 1968

(a) Price including postage within Australia.

(b) Single copies free; for additional copies a charge of 15c each may be made.

(c) Annual subscription \$1 plus 36c postage.

INFORMATION SERVICE

For inquiries regarding statistical information
 telephone the 'Information Service' Officer, 23 9422.

